**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Dec 4 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_004
**Site ID:** S2017AZ019004

**Pedon ID:** S2017AZ019004
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0738
**Soil Name as Described/Sampled:** Nahda
**Classification:** Clayey-skeletal, mixed, superactive, thermic Argic Petrocalcids
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 3 to 38 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 3 cm.
argillic horizon 3 to 38 cm.
petrocalcic horizon 38 to cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.9068056
**Std Longitude:** -110.8154167

**Latitude:** 31 degrees 54 minutes 24.50 seconds north
**Longitude:** 110 degrees 48 minutes 55.50 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 45.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments and 8.0 percent nonflat subrounded indurated 75- to 250-millimeter Mixed rock fragments

**Description database:** KSSL

| Top Depth (cm) | Bottom Depth (cm) | Restriction Kind | Restriction Hardness |
|---|---|---|---|
| 38 | | petrocalcic | Very strongly cemented |

**Cont. Site ID:** S2017AZ019004 **Pedon ID:** S2017AZ019004

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 8.0 | 1,045.0 | 217 | | | | | | | | |

A--0 to 3 centimeters (0.0 to 1.2 inches); strong brown (7.5YR 4/6) gravelly sandy loam, dark brown (7.5YR 3/4), moist; 75 percent sand; 13 percent silt; 12 percent clay; weak thin platy, and weak fine granular structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout; many fine irregular pores; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 20 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; very slight effervescence, by HCl, unspecified; slightly alkaline, pH 7.6, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04439

Bt1--3 to 8 centimeters (1.2 to 3.1 inches); strong brown (7.5YR 4/6) very gravelly sandy clay loam, dark brown (7.5YR 3/4), moist; 60 percent sand; 14 percent silt; 26 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; slightly hard, friable, moderately sticky, moderately plastic; common very fine roots throughout and common fine roots throughout; many very fine tubular and many fine tubular pores; 30 percent distinct clay films on all faces of peds; 10 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 30 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.6, pH indicator solutions; clear wavy boundary. Lab sample # 18N04440

Bt2--8 to 38 centimeters (3.1 to 15.0 inches); reddish brown (5YR 4/4) very cobbly sandy clay, brown (7.5YR 4/4), moist; 50 percent sand; 2 percent silt; 48 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; hard, firm, very sticky, very plastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout and few coarse roots throughout; many very fine irregular and many very fine tubular and many fine tubular pores; 60 percent distinct clay films on all faces of peds and 60 percent distinct clay films on rock fragments; 25 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 25 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; strong effervescence, by HCl, unspecified; slightly alkaline, pH 7.4, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N04441

Bkkm--38 to 100 centimeters (15.0 to 39.4 inches); , by HCl, unspecified. Lab sample # 18N04482

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Dec 6 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_007
**Site ID:** S2017AZ019007

**Pedon ID:** S2017AZ019007
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0739
**Soil Name as Described/Sampled:** Hayhook
**Classification:** Coarse-loamy, mixed, superactive, thermic Typic Haplocambids
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin
on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 33 cm.
cambic horizon 33 to 102 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8976944
**Std Longitude:** -110.8752222

**Latitude:** 31 degrees 53 minutes 51.70 seconds north
**Longitude:** 110 degrees 52 minutes 30.80 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 5.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments
**Description database:** KSSL

**Cont. Site ID:** S2017AZ019007 **Pedon ID:** S2017AZ019007

| 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 | 938.0 | 315 | | | | | | | | |

A1--0 to 3 centimeters (0.0 to 1.2 inches); brown (7.5YR 5/4) loamy sand, brown (7.5YR 4/4), moist; 85 percent sand; 10 percent silt; 5 percent clay; weak fine granular, and moderate medium platy structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; many very fine irregular and many very fine vesicular pores; 3 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04442

A2--3 to 33 centimeters (1.2 to 13.0 inches); brown (7.5YR 5/4) loamy sand, dark brown (7.5YR 3/4), moist; 85 percent sand; 10 percent silt; 5 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout and few fine roots throughout; many very fine irregular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04443

Bw--33 to 69 centimeters (13.0 to 27.2 inches); reddish brown (5YR 4/4) loamy sand, dark reddish brown (5YR 3/4), moist; 85 percent sand; 6 percent silt; 9 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; common very fine roots throughout and few medium roots throughout; many very fine interstitial and many fine interstitial pores; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.2, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N04444

C--69 to 102 centimeters (27.2 to 40.2 inches); reddish brown (5YR 4/4) loamy sand, dark reddish brown (5YR 3/4), moist; 87 percent sand; 8 percent silt; 5 percent clay; structureless massive; loose, loose, nonsticky, nonplastic; common very fine roots throughout; many fine interstitial pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.4, pH indicator solutions. Lab sample # 18N04445

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Dec 8 2017
**Describer:** Samantha Carrillo
**NEON Plot ID:** SRER_013

**Site ID:** S2017AZ019013

**Pedon ID:** S2017AZ019013
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0740
**Soil Name as Described/Sampled:** Combate
**Classification:** Coarse-loamy, mixed, superactive, nonacid, thermic Ustic Torrifluvents
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of alluvial fan
on tread of intermontane basin
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 5 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 41 -- Southeastern Arizona Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8098056
**Std Longitude:** -110.8938889

**Latitude:** 31 degrees 48 minutes 35.30 seconds north
**Longitude:** 110 degrees 53 minutes 38.00 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 2.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments

**Description database:** KSSL

**Cont. Site ID:** S2017AZ019013 **Pedon ID:** S2017AZ019013

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.0 | 1,066.2 | 247 | | | | | | | | |

C1--0 to 5 centimeters (0.0 to 2.0 inches); brown (7.5YR 4/4) loamy sand, dark brown (7.5YR 3/3), moist; 80 percent sand; 10 percent silt; 10 percent clay; moderate thick platy parts to weak medium subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; few very fine roots throughout; many fine irregular pores; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04446

C2--5 to 52 centimeters (2.0 to 20.5 inches); dark yellowish brown (10YR 3/4) gravelly sandy loam, very dark brown (7.5YR 2.5/3), moist; 75 percent sand; 15 percent silt; 10 percent clay; weak medium subangular blocky parts to weak fine subangular blocky structure; slightly hard, very friable, nonsticky, nonplastic; many very fine roots throughout and few fine roots throughout and few coarse roots throughout; common medium tubular and many fine irregular pores; 18 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.2, pH indicator solutions; clear smooth boundary. Lab sample # 18N04447

C3--52 to 83 centimeters (20.5 to 32.7 inches); brown (7.5YR 5/4) very gravelly loamy sand, dark brown (7.5YR 3/3), moist; 83 percent sand; 7 percent silt; 10 percent clay; structureless massive parts to structureless single grain; soft, very friable, nonsticky, nonplastic; few very fine roots throughout and few medium roots throughout and few fine roots throughout; many fine irregular pores; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 30 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions; clear smooth boundary. Lab sample # 18N04448

C4--83 to 102 centimeters (32.7 to 40.2 inches); brown (7.5YR 5/4) gravelly loamy sand, dark brown (7.5YR 3/3), moist; 80 percent sand; 13 percent silt; 7 percent clay; structureless massive parts to structureless single grain; soft, very friable, nonsticky, nonplastic; common very fine roots throughout; many fine irregular pores; 2 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 20 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions. Lab sample # 18N04449

# PEDON DESCRIPTION -- NEON Site SRER

**Print Date:** Jan 3 2019
**Description Date:** Dec 5 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_014
**Site ID:** S2017AZ019014

**Pedon ID:** S2017AZ019014
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0741
**Soil Name as Described/Sampled:** Sandy Haplocambids
**Classification:** Sandy, mixed, superactive, thermic Typic Haplocambids

**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** taxon above family
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on riser of alluvial fan
on riser of intermontane basin
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.
**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 3 cm.
cambic horizon 3 to 76 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8739444
**Std Longitude:** -110.8870833

**Latitude:** 31 degrees 52 minutes 26.20 seconds north
**Longitude:** 110 degrees 53 minutes 13.50 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:**
**Description database:** KSSL

**Cont. Site ID:** S2017AZ019014 **Pedon ID:** S2017AZ019014

| 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 | 964.7 | 317 | | | | | | | | |

A--0 to 3 centimeters (0.0 to 1.2 inches); brown (7.5YR 4/4) loamy sand, dark brown (7.5YR 3/4), moist; 85 percent sand; 10 percent silt; 5 percent clay; weak fine granular, and weak thin platy structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; common very fine tubular and common very fine interstitial pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04450

Bw1--3 to 30 centimeters (1.2 to 11.8 inches); brown (7.5YR 4/4) loamy sand, dark brown (7.5YR 3/4), moist; 85 percent sand; 10 percent silt; 5 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout; common very fine interstitial pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04451

Bw2--30 to 76 centimeters (11.8 to 29.9 inches); dark reddish brown (5YR 3/4) loamy sand, dark reddish brown (5YR 3/4), moist; 85 percent sand; 7 percent silt; 8 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout; many very fine tubular pores; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.4, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04452

2C--76 to 102 centimeters (29.9 to 40.2 inches); dark reddish brown (5YR 3/4) gravelly coarse sand, dark reddish brown (5YR 3/4), moist; 93 percent sand; 3 percent silt; 4 percent clay; structureless massive; loose, loose, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; many very fine interstitial pores; 20 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.6, pH indicator solutions. Lab sample # 18N04453

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Nov 20 2017
**Describer:** Samantha Carrillo
**NEON Plot ID:** SRER_018
**Site ID:** S2017AZ019018

**Pedon ID:** S2017AZ019018
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0742
**Soil Name as Described/Sampled:** Fine-loamy Haplocambids
**Classification:** Fine-loamy, mixed, superactive, calcareous, thermic Typic Torrifluvents
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** taxon above family
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:** 25 to 100 cm.

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

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8978611
**Std Longitude:** -110.9082778

**Latitude:** 31 degrees 53 minutes 52.30 seconds north
**Longitude:** 110 degrees 54 minutes 29.80 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 12.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments

**Description database:** KSSL

**Cont. Site ID:** S2017AZ019018 **Pedon ID:** S2017AZ019018

| 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 | 900.3 | 225 | | | | | | | | |

C--0 to 10 centimeters (0.0 to 3.9 inches); yellowish brown (10YR 5/6) gravelly loamy sand, dark yellowish brown (10YR 3/6), moist; 85 percent sand; 10 percent silt; 5 percent clay; structureless single grain; loose, loose, nonsticky, nonplastic; many fine roots throughout; many fine irregular pores; 30 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N04454

2C1--10 to 33 centimeters (3.9 to 13.0 inches); brown (7.5YR 5/4) loam, dark brown (7.5YR 3/4), moist; 45 percent sand; 37 percent silt; 18 percent clay; moderate thin platy parts to weak medium subangular blocky structure; soft, very friable, slightly sticky, slightly plastic; common fine roots throughout; common fine tubular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; strong effervescence, by HCl, unspecified; moderately alkaline, pH 8.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N04455

2C2--33 to 77 centimeters (13.0 to 30.3 inches); dark yellowish brown (10YR 4/6) silt loam, dark yellowish brown (10YR 3/4), moist; 25 percent sand; 55 percent silt; 20 percent clay; moderate medium subangular blocky, and moderate coarse subangular blocky structure; slightly hard, friable, slightly sticky, moderately plastic; few medium roots throughout and common fine roots throughout; common fine tubular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; slight effervescence, by HCl, unspecified; moderately alkaline, pH 8.2, pH indicator solutions; clear smooth boundary. Lab sample # 18N04456

2C3--77 to 100 centimeters (30.3 to 39.4 inches); brown (7.5YR 4/4) silty clay loam, dark brown (7.5YR 3/3), moist; 15 percent sand; 50 percent silt; 35 percent clay; structureless massive parts to moderate medium subangular blocky; hard, very firm, slightly sticky, moderately plastic; common fine roots throughout and few coarse roots throughout; few fine tubular pores; 30 percent carbonate coats on surfaces along pores; 10 percent fine carbonate masses in matrix; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; slight effervescence, by HCl, unspecified; moderately alkaline, pH 8.0, pH indicator solutions. Lab sample # 18N04457

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Nov 9 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_023

**Site ID:** S2017AZ019023

**Pedon ID:** S2017AZ019023
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0743
**Soil Name as Described/Sampled:** Sandy Haplocambids
**Classification:** Sandy, mixed, superactive, thermic Ustic Haplocambids

**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** taxon above family
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin
on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 8 cm.
cambic horizon 8 to 102 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 41 -- Southeastern Arizona Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8525833
**Std Longitude:** -110.8579722

**Latitude:** 31 degrees 51 minutes 9.30 seconds north
**Longitude:** 110 degrees 51 minutes 28.70 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 8.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments
**Description database:** KSSL

**Cont. Site ID:** S2017AZ019023 **Pedon ID:** S2017AZ019023

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 3.1 | 1,064.0 | 293 | | | | | | | | |

C--0 to 8 centimeters (0.0 to 3.1 inches); brown (7.5YR 5/4) coarse sand, dark brown (7.5YR 3/4), moist; 93 percent sand; 4 percent silt; 3 percent clay; weak fine platy, and weak fine granular structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout; many very fine irregular pores; 3 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04458

Bw1--8 to 46 centimeters (3.1 to 18.1 inches); brown (7.5YR 4/3) coarse sand, dark brown (7.5YR 3/3), moist; 90 percent sand; 5 percent silt; 5 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; common fine tubular pores; 3 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N04459

Bw2--46 to 86 centimeters (18.1 to 33.9 inches); dark reddish brown (5YR 3/3) loamy sand, dark reddish brown (5YR 3/3), moist; 85 percent sand; 8 percent silt; 7 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; common fine tubular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions; clear smooth boundary. Lab sample # 18N04460

Bw3--86 to 102 centimeters (33.9 to 40.2 inches); reddish brown (5YR 4/3) loamy sand, dark reddish brown (5YR 3/4), moist; 85 percent sand; 8 percent silt; 7 percent clay; weak very fine subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; many very fine tubular pores; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions. Lab sample # 18N04461

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Dec 7 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_024

**Site ID:** S2017AZ019024

**Pedon ID:** S2017AZ019024
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0744
**Soil Name as Described/Sampled:** Baboquivari
**Classification:** Fine-loamy, mixed, superactive, thermic Ustic Haplargids

**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin
on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 5 to 55 cm.

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

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 41 -- Southeastern Arizona Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8136389
**Std Longitude:** -110.8067500

**Latitude:** 31 degrees 48 minutes 49.10 seconds north
**Longitude:** 110 degrees 48 minutes 24.30 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 17.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments

**Description database:** KSSL

**Cont. Site ID:** S2017AZ019024 **Pedon ID:** S2017AZ019024

| 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 | 1,327.3 | 248 | | | | | | | | |

A--0 to 5 centimeters (0.0 to 2.0 inches); brown (7.5YR 5/4) loamy sand, dark brown (7.5YR 3/3), moist; 80 percent sand; 15 percent silt; 5 percent clay; moderate thick platy, and weak fine granular structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; many fine irregular pores; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04462

Bt1--5 to 20 centimeters (2.0 to 7.9 inches); strong brown (7.5YR 4/6) loamy sand, dark brown (7.5YR 3/4), moist; 80 percent sand; 12 percent silt; 8 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; many very fine irregular pores; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N04463

Bt2--20 to 36 centimeters (7.9 to 14.2 inches); reddish brown (5YR 4/4) sandy loam, brown (7.5YR 4/4), moist; 75 percent sand; 7 percent silt; 18 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; slightly hard, friable, slightly sticky, slightly plastic; common very fine roots throughout; many very fine irregular pores; 3 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.4, pH indicator solutions; clear smooth boundary. Lab sample # 18N04464

2Bt--36 to 102 centimeters (14.2 to 40.2 inches); brown (7.5YR 5/4) sandy clay, strong brown (7.5YR 4/6), moist; 50 percent sand; 10 percent silt; 40 percent clay; moderate fine angular blocky, and moderate medium angular blocky structure; very hard, firm, moderately sticky, slightly plastic; few very fine roots throughout; many very fine irregular pores; 2 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.8, pH indicator solutions. Lab sample # 18N04465

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Nov 8 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_026

**Site ID:** S2017AZ019026

**Pedon ID:** S2017AZ019026
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0745
**Soil Name as Described/Sampled:** Bodecker
**Classification:** Sandy-skeletal, mixed, thermic Ustic Torrifluvents

**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 8 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 41 -- Southeastern Arizona Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8333333
**Std Longitude:** -110.8437500

**Latitude:** 31 degrees 50 minutes 0.00 seconds north
**Longitude:** 110 degrees 50 minutes 37.50 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous and metamorphic rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 17.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments

**Description database:** KSSL

**Cont. Site ID:** S2017AZ019026 **Pedon ID:** S2017AZ019026

| 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 | 1,160.2 | 352 | | | | | | | | |

C1--0 to 8 centimeters (0.0 to 3.1 inches); dark brown (10YR 3/3) coarse sand, very dark brown (10YR 2/2), moist; 93 percent sand; 4 percent silt; 3 percent clay; weak fine granular structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; many very fine interstitial pores; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; moderately acid, pH 6.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04466

C2--8 to 41 centimeters (3.1 to 16.1 inches); dark brown (10YR 3/3) gravelly coarse sand, very dark brown (10YR 2/2), moist; 93 percent sand; 2 percent silt; 5 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout and few coarse roots throughout; many very fine interstitial pores; 15 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.2, pH indicator solutions; clear smooth boundary. Lab sample # 18N04467

C3--41 to 82 centimeters (16.1 to 32.3 inches); dark yellowish brown (10YR 3/4) gravelly coarse sand, very dark brown (10YR 2/2), moist; 92 percent sand; 3 percent silt; 5 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; soft, very friable, nonsticky, nonplastic; few medium roots throughout and few fine roots throughout; many very fine interstitial pores; 30 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04468

C4--82 to 102 centimeters (32.3 to 40.2 inches); brown (10YR 4/3) extremely cobbly coarse sand, dark yellowish brown (10YR 3/4), moist; 92 percent sand; 5 percent silt; 3 percent clay; structureless massive; loose, loose, nonsticky, nonplastic; few very fine roots throughout; many very fine interstitial pores; 30 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 35 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions. Lab sample # 18N04469

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Nov 7 2017
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_043
**Site ID:** S2017AZ019043

**Pedon ID:** S2017AZ019043
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0749
**Soil Name as Described/Sampled:** Rillino
**Classification:** Coarse-loamy, mixed, superactive, thermic Typic Haplocalcids
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of None Assigned
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 5 cm.
cambic horizon 5 to 33 cm.
calcic horizon 33 to 100 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.9100000
**Std Longitude:** -110.8373333

**Latitude:** 31 degrees 54 minutes 36.00 seconds north
**Longitude:** 110 degrees 50 minutes 14.40 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous and metamorphic rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 13.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments
**Description database:** KSSL

**Cont. Site ID:** S2017AZ019043 **Pedon ID:** S2017AZ019043

| 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 | 995.2 | 259 | | | | | | | | |

A--0 to 5 centimeters (0.0 to 2.0 inches); brown (7.5YR 5/3) loamy sand, brown (7.5YR 4/3), moist; 85 percent sand; 7 percent silt; 8 percent clay; moderate very fine platy, and moderate fine platy structure; soft, very friable, nonsticky, nonplastic; common very fine roots throughout; many very fine vesicular and many very fine irregular pores; 3 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; slightly alkaline, pH 7.8, pH indicator solutions; clear smooth boundary. Lab sample # 18N04483

Bw--5 to 33 centimeters (2.0 to 13.0 inches); brown (7.5YR 5/3) sandy loam, brown (7.5YR 4/3), moist; 75 percent sand; 13 percent silt; 12 percent clay; moderate very fine subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; many very fine roots throughout and few fine roots throughout and few coarse roots throughout; common fine tubular pores; 30 percent distinct carbonate coats on rock fragments; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; slightly alkaline, pH 7.8, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04484

Bk--33 to 76 centimeters (13.0 to 29.9 inches); light brown (7.5YR 6/3) very gravelly coarse sandy loam, brown (7.5YR 5/3), moist; 80 percent sand; 10 percent silt; 10 percent clay; weak fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common very fine roots throughout and few fine roots throughout; many very fine irregular pores; 60 percent distinct carbonate coats on rock fragments; 30 percent fine distinct irregular carbonate masses in matrix; 10 percent nonflat subrounded indurated 75 to 250-millimeter Mica fragments and 25 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; slightly alkaline, pH 7.8, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N04485

2Bk--76 to 102 centimeters (29.9 to 40.2 inches); brown (7.5YR 5/4) sandy loam, brown (7.5YR 4/4), moist; 75 percent sand; 15 percent silt; 10 percent clay; moderate very fine subangular blocky, and moderate fine subangular blocky structure; soft, friable, nonsticky, nonplastic; common very fine roots throughout; many very fine tubular pores; 30 percent prominent carbonate coats on rock fragments; 30 percent very fine distinct irregular carbonate masses in matrix; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; slightly alkaline, pH 7.8, pH indicator solutions. Lab sample # 18N04486

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Jan 30 2018
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_003
**Site ID:** S2018AZ019003

**Pedon ID:** S2018AZ019003
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0746
**Soil Name as Described/Sampled:** Hayhook
**Classification:** Coarse-loamy, mixed, superactive, thermic Typic Haplocambids
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin
on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** linear
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 8 cm.
cambic horizon 8 to 102 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8404722
**Std Longitude:** -110.9170556

**Latitude:** 31 degrees 50 minutes 25.70 seconds north
**Longitude:** 110 degrees 55 minutes 1.40 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 3.0 percent nonflat subangular indurated 2- to 75-millimeter Mixed rock fragments
**Description database:** KSSL

**Cont. Site ID:** S2018AZ019003 **Pedon ID:** S2018AZ019003

| 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 | 975.3 | 360 | | | | | | | | |

A--0 to 8 centimeters (0.0 to 3.1 inches); strong brown (7.5YR 5/6) sandy loam, brown (7.5YR 4/4), moist; 75 percent sand; 18 percent silt; 7 percent clay; moderate thin platy parts to weak fine granular structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout and many fine roots throughout; many very fine irregular and common very fine vesicular pores; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04470

Bw--8 to 46 centimeters (3.1 to 18.1 inches); brown (7.5YR 5/4) sandy loam, brown (7.5YR 4/4), moist; 73 percent sand; 17 percent silt; 10 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; slightly hard, friable, nonsticky, nonplastic; many very fine roots throughout and common medium roots throughout and many fine roots throughout; many very fine tubular pores; 1 percent clay bridges between sand grains; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions; clear smooth boundary. Lab sample # 18N04471

Bt--46 to 84 centimeters (18.1 to 33.1 inches); strong brown (7.5YR 4/6) sandy loam, brown (7.5YR 4/4), moist; 78 percent sand; 10 percent silt; 12 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; hard, firm, slightly sticky, nonplastic; common very fine roots throughout and common fine roots throughout; many very fine tubular pores; 10 percent clay bridges between sand grains and 10 percent clay films on all faces of peds and 10 percent clay films on rock fragments; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.8, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04472

2Bt--84 to 102 centimeters (33.1 to 40.2 inches); strong brown (7.5YR 5/6) gravelly loamy sand, brown (7.5YR 4/4), moist; 85 percent sand; 8 percent silt; 7 percent clay; structureless massive parts to weak medium subangular blocky; loose, loose, nonsticky, nonplastic; common very fine roots throughout and common fine roots throughout; many very fine irregular pores; 10 percent clay films on rock fragments and 10 percent clay bridges between sand grains; 15 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions. Lab sample # 18N04473

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Jan 18 2018
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_008

**Site ID:** S2018AZ019008

**Pedon ID:** S2018AZ019008
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0747
**Soil Name as Described/Sampled:** Eloma
**Classification:** Clayey-skeletal, mixed, superactive, thermic Ustic Haplargids
**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** taxadjunct
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of fan remnant
on tread of intermontane basin
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:** 8 to 58 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 20 cm.
argillic horizon 20 to 102 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 41 -- Southeastern Arizona Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.8669167
**Std Longitude:** -110.8148889

**Latitude:** 31 degrees 52 minutes 0.90 seconds north
**Longitude:** 110 degrees 48 minutes 53.60 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 15.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments
**Description database:** KSSL

| Top Depth (cm) | Bottom Depth (cm) | Restriction Kind | Restriction Hardness |
|---|---|---|---|
| 20 | 102 | abrupt textural change | |

**Cont. Site ID:** S2018AZ019008 **Pedon ID:** S2018AZ019008

| Slope (%) | Elevation (meters) | Aspect (deg) | MAAT (C) | MSAT (C) | MWAT (C) | MAP (mm) | Frost-Free Days | Drainage Class | Slope Length (meters) | Upslope Length (meters) |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.0 | 1,179.0 | 270 | | | | | | | | |

A--0 to 5 centimeters (0.0 to 2.0 inches); strong brown (7.5YR 5/6) gravelly loamy sand, brown (7.5YR 4/4), moist; 85 percent sand; 12 percent silt; 3 percent clay; moderate thick platy, and weak fine granular structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; many very fine irregular and many fine irregular pores; 15 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04474

BA--5 to 20 centimeters (2.0 to 7.9 inches); brown (7.5YR 4/4) and dark brown (7.5YR 3/2) sandy loam; 75 percent sand; 22 percent silt; 8 percent clay; moderate fine subangular blocky, and moderate medium subangular blocky structure; slightly hard, friable, slightly sticky, slightly plastic; many very fine roots throughout; many very fine irregular and many fine irregular pores; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.6, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04475

Bt1--20 to 45 centimeters (7.9 to 17.7 inches); dark reddish brown (2.5YR 3/4) very gravelly sandy clay, dark reddish brown (5YR 3/4), moist; 48 percent sand; 2 percent silt; 50 percent clay; strong fine subangular blocky, and strong medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; common very fine roots throughout; many very fine tubular and many fine tubular pores; 60 percent distinct clay films on all faces of peds and 60 percent distinct clay films on rock fragments; 10 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 40 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 6.8, pH indicator solutions; clear smooth boundary. Lab sample # 18N04476

Bt2--45 to 102 centimeters (17.7 to 40.2 inches); dark reddish brown (2.5YR 3/4) very gravelly sandy clay, dark reddish brown (5YR 3/4), moist; 48 percent sand; 2 percent silt; 50 percent clay; strong fine subangular blocky, and strong medium subangular blocky structure; hard, firm, moderately sticky, moderately plastic; few very fine roots throughout; many very fine tubular and many fine tubular pores; 60 percent distinct clay films on all faces of peds and 60 percent distinct clay films on rock fragments; 45 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; neutral, pH 7.0, pH indicator solutions. Lab sample # 18N04477

**PEDON DESCRIPTION -- NEON Site SRER**

**Print Date:** Jan 3 2019
**Description Date:** Feb 1 2018
**Describer:** Bill Svetlik
**NEON Plot ID:** SRER_016
**Site ID:** S2018AZ019016

**Pedon ID:** S2018AZ019016
**Site Note:**
**Pedon Note:**
**Lab Source ID:** KSSL
**Lab Pedon #:** 18N0748
**Soil Name as Described/Sampled:** Redo
**Classification:** Sandy-skeletal, mixed, thermic Typic Haplocalcids

**Soil Name as Correlated:**

**Classification:**
**Pedon Type:** undefined observation
**Pedon Purpose:** research site
**Taxon Kind:** series
**Associated Soils:**
**Physiographic Division:**
**Physiographic Province:**
**Physiographic Section:**
**State Physiographic Area:**

**Local Physiographic Area:**
**Geomorphic Setting:** on tread of intermontane basin
on tread of fan remnant
**Upslope Shape:** linear
**Cross Slope Shape:** convex
**Particle Size Control Section:** 25 to 100 cm.

**Description origin:** NASIS
**Diagnostic Features:** ochric epipedon 0 to 25 cm.
calcic horizon 25 to 74 cm.

**Country:**
**State:** Arizona
**County:** Pima
**MLRA:** 40 -- Sonoran Basin and Range
**Soil Survey Area:** AZ667 -- Santa Cruz and Parts of Cochise and Pima Counties, Arizona
8-TUC -- Tucson, Arizona
**Map Unit:**
**Pit Location:**
**Quad Name:**
**Std Latitude:** 31.9053611
**Std Longitude:** -110.8469722

**Latitude:** 31 degrees 54 minutes 19.30 seconds north
**Longitude:** 110 degrees 50 minutes 49.10 seconds west
**Datum:** NAD83
**UTM Zone:** 12
**UTM Easting:**
**UTM Northing:**

**Primary Earth Cover:** Shrub cover
**Secondary Earth Cover:** Shrubby rangeland
**Existing Vegetation:**
**Parent Material:** mixed alluvium derived from igneous, metamorphic and sedimentary rock
**Bedrock Kind:**
**Bedrock Depth:**
**Bedrock Hardness:**
**Bedrock Fracture Interval:**
**Surface Fragments:** 40.0 percent nonflat subrounded indurated 2- to 75-millimeter Mixed rock fragments and 10.0 percent nonflat subrounded indurated 75- to 250-millimeter Mixed rock fragments

**Description database:** KSSL

**Cont. Site ID:** S2018AZ019016 **Pedon ID:** S2018AZ019016

| 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 | 980.9 | 220 | | | | | | | | |

A--0 to 8 centimeters (0.0 to 3.1 inches); yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4), moist; 75 percent sand; 17 percent silt; 8 percent clay; weak thick platy parts to weak fine subangular blocky structure; soft, very friable, nonsticky, nonplastic; many very fine roots throughout; many very fine tubular and many very fine vesicular pores; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.6, pH indicator solutions; clear smooth boundary. Lab sample # 18N04478

Bw--8 to 25 centimeters (3.1 to 9.8 inches); brown (7.5YR 4/4) extremely gravelly sandy loam, dark brown (7.5YR 3/3), moist; 75 percent sand; 17 percent silt; 8 percent clay; structureless massive parts to weak medium subangular blocky; soft, very friable, nonsticky, nonplastic; many very fine roots throughout and common medium roots throughout and few coarse roots throughout; many very fine irregular pores; 30 percent faint carbonate coats on rock fragments; 20 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 45 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; noneffervescent, by HCl, unspecified; slightly alkaline, pH 7.6, pH indicator solutions; abrupt wavy boundary. Lab sample # 18N04479

Bkk--25 to 74 centimeters (9.8 to 29.1 inches); light brown (7.5YR 6/4) extremely gravelly loamy sand, brown (7.5YR 4/4), moist; 90 percent sand; 3 percent silt; 7 percent clay; structureless massive, and weak medium subangular blocky; loose, loose, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout; many fine irregular pores; 60 percent faint carbonate coats on rock fragments; 25 percent fine carbonate masses in matrix and 25 percent medium carbonate masses in matrix; 10 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 65 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; moderately alkaline, pH 8.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 18N04480

2Ck--74 to 100 centimeters (29.1 to 39.4 inches); brown (7.5YR 5/4) very gravelly coarse sand, brown (7.5YR 4/4), moist; 90 percent sand; 5 percent silt; 5 percent clay; structureless massive; loose, loose, nonsticky, nonplastic; many very fine roots throughout and few medium roots throughout and many fine roots throughout; many fine irregular pores; 30 percent faint carbonate coats on rock fragments; 10 percent fine carbonate masses in matrix and 10 percent medium carbonate masses in matrix; 45 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; violent effervescence, by HCl, unspecified; moderately alkaline, pH 8.2, pH indicator solutions. Lab sample # 18N04481