PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 27 2016

Describer: Ryan Bevernitz

NEON Plot ID: UNDE_001

Site ID: S2016MI053001

Pedon ID: S2016MI053001

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 10.5 meters and 80 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note: Roots stop abruptly above the Bx-horizon at 47 cm; water seeping into pit at 92cm

Lab Source ID: KSSL

Lab Pedon #: 16N0972

Soil Name as Described/Sampled: Schweitzer

Classification: Coarse-loamy, mixed, superactive, frigid Fragic Haplorthods

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 backslope of nose slope of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: convex

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 9 cm.
albic horizon 3 to 9 cm.
spodic horizon 9 to 47 cm.
fragic soil properties 47 to 66 cm.
densic contact 66 to 66 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 44C -- Karlin-Keweenaw-Sarona, dense substratum, complex, 6 to 25 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 10.5 meters and 80 degrees from the SW 40m X 40m corner to the center of the soil pit.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2344900

Std Longitude: 89.5608900

Latitude: 46 degrees 14 minutes 4.16 seconds north

Longitude: 89 degrees 33 minutes 39.20 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation:

Parent Material: loamy glaciofluvial deposits over dense loamy till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
66	167	densic material	Noncemented

Cont. Site ID: S2016MI053001 **Pedon ID:** S2016MI053001

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
10.0	561.0	24						well		

Oa--0 to 3 centimeters (0.0 to 1.2 inches); black (10YR 2/1) highly decomposed plant material; very friable; very fine roots throughout and fine roots throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04326

E--3 to 9 centimeters (1.2 to 3.5 inches); brown (7.5YR 5/2) fine sandy loam, pinkish gray (7.5YR 7/2), dry; weak medium subangular blocky parts to weak medium platy structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; abrupt irregular boundary. Lab sample # 16N04327

Bhs--9 to 16 centimeters (3.5 to 6.3 inches); dark reddish brown (5YR 3/3) fine sandy loam; weak medium subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04328

Bs1--16 to 30 centimeters (6.3 to 11.8 inches); 50 percent dark reddish brown (5YR 3/4) and 50 percent reddish brown (5YR 4/4) fine sandy loam; weak medium subangular blocky, and weak coarse subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04329

Bs2--30 to 47 centimeters (11.8 to 18.5 inches); dark brown (7.5YR 3/4) fine sandy loam; moderate medium subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04330

2Bx--47 to 66 centimeters (18.5 to 26.0 inches); reddish brown (5YR 4/3) gravelly sandy loam; strong medium platy parts to moderate medium subangular blocky, and strong thin platy parts to moderate medium subangular blocky structure; firm; fine roots top of horizon; very fine vesicular pores; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04331. material is brittle

2BCd--66 to 167 centimeters (26.0 to 65.7 inches); reddish brown (5YR 5/3) gravelly sandy loam; moderate medium platy structure; firm; 2 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04332

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018
Description Date: Apr 27 2016
Describer: Roger Risley
NEON Plot ID: UNDE_002

Site ID: S2016MI053002

Pedon ID: S2016MI053002

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 2.5 meters and 45 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0973
Soil Name as Described/Sampled: Greenwood
Classification: Dysic, frigid Typic Haplohemists

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 toeslope of dip depression on till plain
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:
Description origin: NASIS
Diagnostic Features: fibric soil materials 0 to 10 cm.
hemic soil materials 10 to 135 cm.
sapric soil materials 135 to 200 cm.

Country:
State: Michigan
County: Gogebic
MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part
Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin
Map Unit: 41 -- Lupton-Pleine-Cathro complex, 0 to 1 percent slopes
Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 2.5 meters and 45 degrees from the SW 40m X 40m corner to the center of the soil pit.
Quad Name: Tenderfoot Lake, Wisconsin
Std Latitude: 46.2428900
Std Longitude: 89.5451000

Latitude: 46 degrees 14 minutes 34.50 seconds north
Longitude: 89 degrees 32 minutes 42.29 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

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

Cont. Site ID: S2016MI053002 **Pedon ID:** S2016MI053002

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
0.0	450.0							very poorly		

Oi--0 to 10 centimeters (0.0 to 3.9 inches); very dark brown (7.5YR 2.5/2) peat; very strongly acid, pH 4.5, pH indicator strip. Lab sample # 16N04333

Oe--10 to 135 centimeters (3.9 to 53.1 inches); reddish gray (5YR 5/2) mucky peat; very strongly acid, pH 4.5, pH indicator strip. Lab sample # 16N04334

Oa--135 to 200 centimeters (53.1 to 78.7 inches); black (10YR 2/1) muck; very strongly acid, pH 5.0, pH indicator strip. Lab sample # 16N04335

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 26 2016

Describer: Roger Risley

NEON Plot ID: UNDE_006

Site ID: S2016MI053004

Pedon ID: S2016MI053004

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 5.7 meters and 72 degrees from the SW 40m X 40m corner to the center of the soil pit and 313 degrees from the center of pit to the pit face.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0974

Soil Name as Described/Sampled: Newot

Classification: Coarse-loamy, mixed, superactive, frigid Alfic Haplorthods

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 shoulder of side slope of disintegration moraine on till plain

Upslope Shape: convex

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 11 cm.
albic horizon 11 to 17 cm.
spodic horizon 17 to 31 cm.
glossic horizon 31 to 46 cm.
argillic horizon 46 to 61 cm.
densic contact 61 to 61 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 44D -- Karlin-Keweenaw-Sarona, dense substratum, complex, 25 to 50 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 5.7 meters and 72 degrees from the SW 40m X 40m corner to the center of the soil pit and 313 degrees from the center of pit to the pit face.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2545400

Std Longitude: 89.5128600

Latitude: 46 degrees 15 minutes 15.95 seconds north

Longitude: 89 degrees 30 minutes 46.51 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation:

Parent Material: loamy glaciofluvial deposits and/or local loess over dense loamy till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
61	112	densic material	Noncemented

Cont. Site ID: S2016MI053004 **Pedon ID:** S2016MI053004

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
12.0	530.0	270						well		

A--0 to 11 centimeters (0.0 to 4.3 inches); dark brown (7.5YR 3/3) fine sandy loam; weak medium granular structure; very friable; very fine roots and medium roots and fine roots and coarse roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; diffuse wavy boundary. Lab sample # 16N04336

E--11 to 17 centimeters (4.3 to 6.7 inches); brown (7.5YR 4/2) fine sandy loam; moderate medium platy structure; very friable; very fine roots and medium roots and fine roots and coarse roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; diffuse wavy boundary. Lab sample # 16N04337

Bs--17 to 31 centimeters (6.7 to 12.2 inches); reddish brown (5YR 4/4) fine sandy loam; moderate medium subangular blocky, and moderate coarse subangular blocky structure; very friable; medium roots and fine roots and coarse roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04338

E/B--31 to 46 centimeters (12.2 to 18.1 inches); 80 percent reddish brown (5YR 4/3) and 20 percent reddish brown (5YR 4/4) sandy loam; moderate medium subangular blocky, and moderate coarse subangular blocky structure; very friable; medium roots and fine roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04339

2Bt--46 to 61 centimeters (18.1 to 24.0 inches); reddish brown (5YR 4/4) sandy loam; moderate medium subangular blocky, and moderate coarse subangular blocky structure; friable; medium roots and fine roots; very fine vesicular pores; 2 percent faint 5YR 3/3), moist, clay films on all faces of peds; 2 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04340

2Cd--61 to 112 centimeters (24.0 to 44.1 inches); dark reddish brown (2.5YR 3/4) gravelly sandy loam; structureless massive; firm; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04341. very platy - geogenic

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 28 2016

Describer: Mike England

NEON Plot ID: UNDE_010

Site ID: S2016MI053007

Pedon ID: S2016MI053007

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 2.5 meters and 20 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note: Water at surface; woody fragments at 80cm not decomposed

Lab Source ID: KSSL

Lab Pedon #: 16N0975

Soil Name as Described/Sampled: Cathro

Classification: Loamy, mixed, euic, frigid Terric Haplosaprists

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 toeslope of nutrient poor fen on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 30 to 90 cm.

Description origin: NASIS

Diagnostic Features: fibric soil materials 0 to 10 cm.
hemic soil materials 10 to 24 cm.
sapric soil materials 24 to 102 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 28 -- Dawson, Greenwood, and Loxley soils, 0 to 1 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 2.5 meters and 20 degrees from the SW 40m X 40m corner to the center of the soil pit.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2376000

Std Longitude: 89.5421400

Latitude: 46 degrees 14 minutes 15.30 seconds north

Longitude: 89 degrees 32 minutes 31.60 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Swamp

Existing Vegetation:

Parent Material: organic material over loamy alluvium

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053007 **Pedon ID:** S2016MI053007

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
0.0	529.0							very poorly		

Oi--0 to 10 centimeters (0.0 to 3.9 inches); dark brown (7.5YR 3/2) peat; . Lab sample # 16N04342

Oe--10 to 24 centimeters (3.9 to 9.4 inches); very dark brown (10YR 2/2) mucky peat; . Lab sample # 16N04343

Oa1--24 to 66 centimeters (9.4 to 26.0 inches); black (10YR 2/1) muck; . Lab sample # 16N04344

Oa2--66 to 102 centimeters (26.0 to 40.2 inches); very dark brown (10YR 2/2) muck; 5 percent Wood fragments. Lab sample # 16N04345

Cg--102 to 108 centimeters (40.2 to 42.5 inches); dark olive brown (2.5Y 3/3) fine sandy loam; structureless massive; .

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 26 2016

Describer: Mike Rokus

NEON Plot ID: UNDE_012

Site ID: S2016MI053009

Pedon ID: S2016MI053009

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 13.1 meters and 70 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note: water seeping in pit at 62 cm

Lab Source ID: KSSL

Lab Pedon #: 16N0976

Soil Name as Described/Sampled: Schweitzer

Classification: Coarse-loamy, mixed, superactive, frigid Alfic Fragiorthods

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 backslope of side slope of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 4 cm.
spodic horizon 14 to 60 cm.
fragipan 60 to 100 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 44C -- Karlin-Keweenaw-Sarona, dense substratum, complex, 6 to 25 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 13.1 meters and 70 degrees from the SW 40m X 40m corner to the center of the soil pit.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2368900

Std Longitude: 89.5045000

Latitude: 46 degrees 14 minutes 12.44 seconds north

Longitude: 89 degrees 30 minutes 16.99 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation:

Parent Material: Superior Lobe till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Top Depth (cm)	Bottom Depth (cm)	Restriction Kind	Restriction Hardness
60	100	fragipan	

Cont. Site ID: S2016MI053009 **Pedon ID:** S2016MI053009

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	518.0	15						well		

A--0 to 14 centimeters (0.0 to 5.5 inches); dark brown (7.5YR 3/2) cobbly fine sandy loam; weak fine subangular blocky, and weak medium granular structure; friable; medium roots and fine roots and coarse roots; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments and 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04346. many worms

Bhs--14 to 25 centimeters (5.5 to 9.8 inches); dark reddish brown (5YR 3/3) fine sandy loam; weak fine subangular blocky structure; friable; medium roots and fine roots; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments and 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04347

Bs1--25 to 46 centimeters (9.8 to 18.1 inches); reddish brown (5YR 4/4) fine sandy loam; moderate medium angular blocky parts to moderate fine angular blocky structure; friable; medium roots and fine roots; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments and 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04348

Bs2--46 to 60 centimeters (18.1 to 23.6 inches); reddish brown (5YR 4/4) gravelly sandy loam; moderate medium angular blocky parts to moderate fine angular blocky structure; friable; fine roots; 10 percent fine 5YR 4/6), moist, masses of oxidized iron; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04349

Bx--60 to 100 centimeters (23.6 to 39.4 inches); reddish brown (5YR 4/4) gravelly sandy loam; moderate medium angular blocky parts to moderate fine angular blocky, and moderate medium angular blocky parts to weak medium platy structure; firm; 5 percent medium 2.5YR 4/6), moist, masses of oxidized iron; 5 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04350. 5% 7.5YR 4/3 E material

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018
Description Date: Apr 25 2016
Describer: Ryan Bevernitz
NEON Plot ID: UNDE_013

Site ID: S2016MI053010

Pedon ID: S2016MI053010

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 10.01 meters and 62 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0977
Soil Name as Described/Sampled: McMillan
Classification: Sandy, mixed, frigid Lamellic Haplorthods

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 backslope of side slope 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 9 cm.
spodic horizon 9 to 64 cm.
lamellae 64 to 125 cm.

Country:
State: Michigan
County: Gogebic
MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part
Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin
Map Unit: 5172C -- Gogebic, sandy substratum-Pence-Cathro complex, 0 to 18 percent slopes
Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 10.01 meters and 62 degrees from the SW 40m X 40m corner to the center of the soil pit.
Quad Name: Tenderfoot Lake, Wisconsin
Std Latitude: 46.2278000
Std Longitude: 89.5372400

Latitude: 46 degrees 13 minutes 39.71 seconds north
Longitude: 89 degrees 32 minutes 14.55 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: loamy glaciofluvial deposits over sandy and gravelly outwash
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2016MI053010 **Pedon ID:** S2016MI053010

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	512.0	90						well		

A--0 to 9 centimeters (0.0 to 3.5 inches); very dark brown (10YR 2/2) sandy loam; weak medium granular structure; very friable; very fine roots throughout and fine roots throughout; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear wavy boundary. Lab sample # 16N04351. 10 percent uncoated sand grains. 10YR6/2

Bhs--9 to 18 centimeters (3.5 to 7.1 inches); dark brown (7.5YR 3/3) sandy loam; weak fine subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04352

Bs1--18 to 28 centimeters (7.1 to 11.0 inches); brown (7.5YR 4/3) sandy loam; weak medium subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; gradual smooth boundary. Lab sample # 16N04353

Bs2--28 to 64 centimeters (11.0 to 25.2 inches); brown (7.5YR 4/4) loamy sand; weak medium subangular blocky, and weak coarse subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; 1 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear smooth boundary. Lab sample # 16N04354

E and Bt--64 to 125 centimeters (25.2 to 49.2 inches); brown (7.5YR 5/4) sand; single grain; loose; medium roots throughout and fine roots throughout; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; 1 percent lamellae (volume percent); gradual smooth boundary. Lab sample # 16N04355. 4 millimeters thickness total. thin lamellae. cobble observed with lamellae over top of it.

2C--125 to 152 centimeters (49.2 to 59.8 inches); brown (7.5YR 5/4) stratified sand to gravelly coarse sand; single grain; loose; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04356. HORIZON WAS STRATIFIED FOR BOTH TEXTURE AND GRAVEL. GRAVEL LAYERS WHERE COS WITH UP TO 25% CF'S. OTHER LAYERS WERE MEDIUM SAND WITH 1% GRAVELS.

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018
Description Date: Apr 27 2016
Describer: Pete Weikle
NEON Plot ID: UNDE_018

Site ID: S2016MI053015

Pedon ID: S2016MI053015

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 5.82 meters and 40 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note: Depth to water table = 7cm
Lab Source ID: KSSL
Lab Pedon #: 16N0978
Soil Name as Described/Sampled: Greenwood
Classification: Dysic, frigid Typic Haplohemists

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 toeslope of dip bog on till plain
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:
Description origin: NASIS
Diagnostic Features: fibric soil materials 0 to 16 cm.
hemic soil materials 16 to 175 cm.

Country:
State: Michigan
County: Gogebic
MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part
Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin
Map Unit: 41 -- Lupton-Pleine-Cathro complex, 0 to 1 percent slopes
Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 5.82 meters and 40 degrees from the SW 40m X 40m corner to the center of the soil pit.
Quad Name: Tenderfoot Lake, Wisconsin
Std Latitude: 46.2429500
Std Longitude: 89.5349800

Latitude: 46 degrees 14 minutes 34.34 seconds north
Longitude: 89 degrees 32 minutes 5.86 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Swamp
Existing Vegetation: black spruce, bog rosemary, creeping snowberry, Labrador tea, leatherleaf, old man's beard, sphagnum, tamarack
Parent Material: mossy organic material
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2016MI053015 **Pedon ID:** S2016MI053015

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
0.0	497.0							very poorly		

Oi--0 to 16 centimeters (0.0 to 6.3 inches); reddish brown (2.5YR 5/4) peat; . Lab sample # 16N04357

Oe1--16 to 75 centimeters (6.3 to 29.5 inches); black (10YR 2/1) mucky peat; . Lab sample # 16N04358

Oe2--75 to 175 centimeters (29.5 to 68.9 inches); very dark brown (10YR 2/2) mucky peat; . Lab sample # 16N04359

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 28 2016

Describer: Roger Risley

NEON Plot ID: UNDE_019

Site ID: S2016MI053016

Pedon ID: S2016MI053016

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 9.5 meters and 60 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0984

Soil Name as Described/Sampled: Schweitzer

Classification: Loamy-skeletal, mixed, frigid Alfic Haplorthods

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 summit of interfluve of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 14 cm.
spodic horizon 14 to 63 cm.
glossic horizon 63 to 88 cm.
argillic horizon 63 to 88 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 39C -- Gogebic silt loam, sandy substratum, 6 to 18 percent slopes, stony

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 9.5 meters and 60 degrees from the SW 40m X 40m corner to the center of the soil pit.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2581400

Std Longitude: 89.5435100

Latitude: 46 degrees 15 minutes 29.04 seconds north

Longitude: 89 degrees 32 minutes 37.81 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation:

Parent Material: loamy glaciofluvial deposits and/or loamy eolian deposits over loamy till over sandy and gravelly till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053016 **Pedon ID:** S2016MI053016

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	542.0	95						well		

AE--0 to 14 centimeters (0.0 to 5.5 inches); 90 percent very dark brown (10YR 2/2) and 10 percent brown (7.5YR 5/2) fine sandy loam; weak medium subangular blocky, and weak medium granular structure; very friable; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; abrupt wavy boundary. Lab sample # 16N04389

Bhs--14 to 27 centimeters (5.5 to 10.6 inches); very dusky red (2.5YR 2/2) fine sandy loam; moderate medium subangular blocky structure; very friable; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; clear wavy boundary. Lab sample # 16N04390

Bs1--27 to 44 centimeters (10.6 to 17.3 inches); dark reddish brown (5YR 3/4) very gravelly fine sandy loam; moderate medium subangular blocky structure; very friable; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 45 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; diffuse wavy boundary. Lab sample # 16N04391

Bs2--44 to 63 centimeters (17.3 to 24.8 inches); dark reddish brown (5YR 3/4) extremely gravelly fine sandy loam; weak fine subangular blocky structure; very friable; 5 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 55 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments; abrupt irregular boundary. Lab sample # 16N04392

2E/B--63 to 88 centimeters (24.8 to 34.6 inches); 60 percent weak red (2.5YR 5/2) and 60 percent pinkish gray (5YR 7/2) and 40 percent reddish brown (2.5YR 4/3) gravelly sandy loam, gravelly loam; 24 percent clay; strong coarse subangular blocky structure; friable; many fine vesicular pores; 10 percent faint 2.5YR 4/3), moist, clay films on all faces of peds; 20 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments; abrupt irregular boundary. Lab sample # 16N04393

3BC--88 to 100 centimeters (34.6 to 39.4 inches); reddish brown (2.5YR 4/3) very gravelly sand; structureless single grain; loose; 50 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04394

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 26 2016

Describer: Larissa Hindman

NEON Plot ID: UNDE_030

Site ID: S2016MI053026

Pedon ID: S2016MI053026

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 1.53 meters and 60 degrees from the SW 40m X 40m corner to the center of the soil pit.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0979

Soil Name as Described/Sampled: Sarona

Classification: Coarse-loamy, mixed, superactive, frigid Alfic Haplorthods

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 backslope of side slope of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 17 cm.
albic horizon 9 to 17 cm.
spodic materials 17 to 56 cm.
albic materials 56 to 110 cm.
argillic horizon 110 to 151 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 38C -- Gogebic fine sandy loam, sandy substratum, 6 to 18 percent slopes, stony

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 1.53 meters and 60 degrees from the SW 40m X 40m corner to the center of the soil pit.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2344200

Std Longitude: 89.5190400

Latitude: 46 degrees 14 minutes 3.53 seconds north

Longitude: 89 degrees 31 minutes 8.41 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation:

Parent Material: loamy till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053026 **Pedon ID:** S2016MI053026

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	515.0	325						well		

Oe--0 to 9 centimeters (0.0 to 3.5 inches); moderately decomposed plant material; very fine roots and very coarse roots and medium roots and fine roots and coarse roots; . Lab sample # 16N04360

E--9 to 17 centimeters (3.5 to 6.7 inches); fine sandy loam; moderate medium subangular blocky structure; friable; medium roots and fine roots and coarse roots; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04361

Bs1--17 to 28 centimeters (6.7 to 11.0 inches); sandy loam; weak fine subangular blocky structure; very friable; medium roots and fine roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 8 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04362

Bs2--28 to 56 centimeters (11.0 to 22.0 inches); sandy loam; weak fine subangular blocky structure; very friable; medium roots and fine roots; 1 percent nonflat subrounded indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04363

E'--56 to 110 centimeters (22.0 to 43.3 inches); stony loamy fine sand; weak medium subangular blocky structure; very friable; 2 percent fine distinct 5YR 4/6), moist, masses of oxidized iron; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments and 8 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments and 10 percent nonflat subangular indurated 250 to 600-millimeter Mixed rock fragments. Lab sample # 16N04364

2Bt--110 to 151 centimeters (43.3 to 59.4 inches); sandy loam; weak medium subangular blocky structure; friable; 10 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04365

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 27 2016

Describer: Pete Weikle

NEON Plot ID: UNDE_037

Site ID: S2016MI053031

Pedon ID: S2016MI053031

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 5.34 meters and 55 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Pedon Note: Depth to Water Table = 103 cm

Lab Source ID: KSSL

Lab Pedon #: 16N0980

Soil Name as Described/Sampled: Sarona

Classification: Coarse-loamy, mixed, superactive, frigid Alfic Haplorthods

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 backslope of side slope of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 25 cm.
albic horizon 13 to 25 cm.
spodic horizon 25 to 46 cm.
glossic horizon 46 to 128 cm.
argillic horizon 68 to 128 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 36 -- Gay-Pleine complex, 0 to 1 percent slopes, stony

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 5.34 meters and 55 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2311400

Std Longitude: 89.5421500

Latitude: 46 degrees 13 minutes 51.96 seconds north

Longitude: 89 degrees 32 minutes 31.92 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: balsam fir, beaked hazelnut, bunchberry dogwood, quaking aspen, red maple

Parent Material: loamy till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053031 **Pedon ID:** S2016MI053031

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
11.0	556.0	320						well		

Oe--0 to 13 centimeters (0.0 to 5.1 inches); black (10YR 2/1) moderately decomposed plant material; . Lab sample # 16N04366

E--13 to 25 centimeters (5.1 to 9.8 inches); brown (7.5YR 4/2) gravelly sandy loam; 10 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments and 15 percent nonflat subangular indurated 75 to 250-millimeter Mixed rock fragments. Lab sample # 16N04367

Bs--25 to 46 centimeters (9.8 to 18.1 inches); dark reddish brown (5YR 3/4) sandy loam; 8 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04368

E/B--46 to 68 centimeters (18.1 to 26.8 inches); 70 percent reddish brown (5YR 5/3) and 30 percent reddish brown (5YR 4/4) loamy fine sand, fine sandy loam; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04369

B/E1--68 to 87 centimeters (26.8 to 34.3 inches); 70 percent reddish brown (5YR 4/4) and 30 percent reddish brown (5YR 5/3) loamy fine sand, fine sandy loam; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04370

B/E2--87 to 106 centimeters (34.3 to 41.7 inches); 85 percent reddish brown (2.5YR 4/4) and 15 percent reddish brown (2.5YR 5/3) fine sandy loam, loam; 5 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04371

B/E3--106 to 128 centimeters (41.7 to 50.4 inches); 85 percent reddish brown (2.5YR 4/4) and 15 percent reddish brown (2.5YR 5/3) gravelly fine sandy loam, gravelly clay loam; 25 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments.

2C--128 to 136 centimeters (50.4 to 53.5 inches); reddish brown (5YR 4/3) stratified very gravelly loamy coarse sand to very fine sandy loam; 50 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments.

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018
Description Date: Apr 28 2016
Describer: Mike England
NEON Plot ID: UNDE_038

Site ID: S2016MI053032

Pedon ID: S2016MI053032

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 3.95 meters and 20 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Pedon Note: Depth to Water Table = 3cm
Lab Source ID: KSSL
Lab Pedon #: 16N0981
Soil Name as Described/Sampled: Cathro
Classification: Loamy, mixed, euic, frigid Terric Haplosaprists

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 toeslope of dip poor fen on till plain
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section:
Description origin: NASIS

Diagnostic Features: fibric soil materials 0 to 8 cm.
hemic soil materials 8 to 27 cm.
sapric soil materials 27 to 76 cm.

Country:
State: Michigan
County: Gogebic
MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part
Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin
Map Unit: 41 -- Lupton-Pleine-Cathro complex, 0 to 1 percent slopes
Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 3.95 meters and 20 degrees from the SW 40m X 40m corner to the center of the soil auger hole.
Quad Name: Tenderfoot Lake, Wisconsin
Std Latitude: 46.2321100
Std Longitude: 89.5348800

Latitude: 46 degrees 13 minutes 55.47 seconds north
Longitude: 89 degrees 32 minutes 5.47 seconds west
Datum: WGS84
UTM Zone:
UTM Easting:
UTM Northing:

Primary Earth Cover: Tree cover
Secondary Earth Cover: Swamp
Existing Vegetation: arborvitae, black spruce, brackenfern, Labrador tea, paper birch, red maple, sphagnum
Parent Material: organic material over loamy alluvium
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL

Cont. Site ID: S2016MI053032 **Pedon ID:** S2016MI053032

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
0.0	495.0							very poorly		

Oi--0 to 8 centimeters (0.0 to 3.1 inches); olive brown (2.5Y 4/3) peat; . Lab sample # 16N04372

Oe--8 to 27 centimeters (3.1 to 10.6 inches); very dark brown (10YR 2/2) mucky peat; . Lab sample # 16N04373

Oa--27 to 76 centimeters (10.6 to 29.9 inches); black (10YR 2/1) muck; . Lab sample # 16N04374

A--76 to 96 centimeters (29.9 to 37.8 inches); black (10YR 2/1) mucky silt loam; 2 percent fine prominent 2.5YR 3/6), moist, masses of oxidized iron. Lab sample # 16N04375

C--96 to 113 centimeters (37.8 to 44.5 inches); light olive brown (2.5Y 5/3) silt loam; 25 percent distinct 10YR 3/2), moist, organic stains on all faces of peds; 10 percent medium faint 2.5YR 5/4), moist, masses of oxidized iron. Lab sample # 16N04376

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 26 2016

Describer: Roger Risley

NEON Plot ID: UNDE_043

Site ID: S2016MI053033

Pedon ID: S2016MI053033

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 18.0 meters and 31 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0982

Soil Name as Described/Sampled: Sarona

Classification: Coarse-loamy, mixed, superactive, frigid Entic Haplorthods

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 backslope of side slope of disintegration moraine on till plain

Upslope Shape: convex

Cross Slope Shape: convex

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 10 cm.
spodic horizon 10 to 38 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 5172C -- Gogebic, sandy substratum-Pence-Cathro complex, 0 to 18 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 18.0 meters and 31 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2341600

Std Longitude: 89.5426300

Latitude: 46 degrees 14 minutes 2.61 seconds north

Longitude: 89 degrees 32 minutes 33.82 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Hardwoods

Existing Vegetation:

Parent Material: loamy glaciofluvial deposits and/or local loess over loamy till

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053033 **Pedon ID:** S2016MI053033

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
10.0	641.0	159						well		

A--0 to 10 centimeters (0.0 to 3.9 inches); very dark brown (7.5YR 2.5/2) silt loam; 1 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04377

Bs1--10 to 26 centimeters (3.9 to 10.2 inches); dark reddish brown (5YR 3/4) fine sandy loam; 1 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04378

Bs2--26 to 38 centimeters (10.2 to 15.0 inches); reddish brown (5YR 4/4) fine sandy loam; 1 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04379

Bw1--38 to 69 centimeters (15.0 to 27.2 inches); brown (7.5YR 4/4) loam; 5 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04380

2Bw2--69 to 111 centimeters (27.2 to 43.7 inches); brown (7.5YR 4/3) sandy loam; 10 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04381

2BC--111 to 137 centimeters (43.7 to 53.9 inches); dark brown (7.5YR 3/4) gravelly sandy loam; 20 percent nonflat subangular indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04382

PEDON DESCRIPTION -- NEON Site UNDE

Print Date: Mar 20 2018

Description Date: Apr 28 2016

Describer: Roger Risley

NEON Plot ID: UNDE_044

Site ID: S2016MI053034

Pedon ID: S2016MI053034

Site Note: This pedon is for the NEON sampling project at the UNDERC site. 9.0 meters and 45 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Pedon Note:

Lab Source ID: KSSL

Lab Pedon #: 16N0983

Soil Name as Described/Sampled: Worcester

Classification: Coarse-loamy, mixed, superactive, frigid Typic Endoaquods

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 footslope of base slope of disintegration moraine on till plain

Upslope Shape: linear

Cross Slope Shape: linear

Particle Size Control Section: 25 to 100 cm.

Description origin: NASIS

Diagnostic Features: ochric epipedon 0 to 10 cm.
albic materials 0 to 10 cm.
spodic horizon 18 to 78 cm.

Country:

State: Michigan

County: Gogebic

MLRA: 93B -- Superior Stony and Rocky Loamy Plains and Hills, Eastern Part

Soil Survey Area: MI053 -- Gogebic County, Michigan
10-RHI -- Rhinelander, Wisconsin

Map Unit: 5172C -- Gogebic, sandy substratum-Pence-Cathro complex, 0 to 18 percent slopes

Pit Location: This pedon is for the NEON sampling project at the UNDERC site. 9.0 meters and 45 degrees from the SW 40m X 40m corner to the center of the soil auger hole.

Quad Name: Tenderfoot Lake, Wisconsin

Std Latitude: 46.2316300

Std Longitude: 89.5327900

Latitude: 46 degrees 13 minutes 53.68 seconds north

Longitude: 89 degrees 31 minutes 58.38 seconds west

Datum: WGS84

UTM Zone:

UTM Easting:

UTM Northing:

Primary Earth Cover: Tree cover

Secondary Earth Cover: Intermixed conifers and hardwoods

Existing Vegetation: balsam fir, black cherry, quaking aspen, red maple

Parent Material: loamy glaciofluvial deposits over stratified sandy outwash

Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:

Bedrock Fracture Interval:

Surface Fragments:

Description database: KSSL

Cont. Site ID: S2016MI053034 **Pedon ID:** S2016MI053034

Slope (%)	Elevation (meters)	Aspect (deg)	MAAT (C)	MSAT (C)	MWAT (C)	MAP (mm)	Frost-Free Days	Drainage Class	Slope Length (meters)	Upslope Length (meters)
1.0	530.0	73						somewhat poorly		

A/E--0 to 10 centimeters (0.0 to 3.9 inches); 70 percent black (7.5YR 2.5/1) and 30 percent brown (7.5YR 4/3) fine sandy loam; very friable; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04383. E-horizon has broken boundary and is patchy in site

Bhs--10 to 18 centimeters (3.9 to 7.1 inches); dark reddish brown (5YR 3/3) fine sandy loam; very friable; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04384

Bs1--18 to 47 centimeters (7.1 to 18.5 inches); reddish brown (5YR 4/3) fine sandy loam; very friable; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04385

Bs2--47 to 78 centimeters (18.5 to 30.7 inches); dark reddish brown (5YR 3/4) fine sandy loam; very friable; 10 percent medium faint 5YR 4/6), moist, masses of oxidized iron; 2 percent nonflat subrounded indurated 2 to 75-millimeter Mixed rock fragments. Lab sample # 16N04386

BC--78 to 110 centimeters (30.7 to 43.3 inches); reddish brown (5YR 4/4) loamy sand; loose; 10 percent medium faint 5YR 4/6), moist, masses of oxidized iron. Lab sample # 16N04387

2C--110 to 148 centimeters (43.3 to 58.3 inches); brown (7.5YR 4/4) stratified loamy sand to very fine sandy loam; loose; 1 percent fine distinct 5YR 5/6), moist, masses of oxidized iron and 20 percent coarse prominent 5YR 6/2), moist, iron depletions. Lab sample # 16N04388