PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 6 2016
Describer: Greg Taylor
NEON Plot ID: SERC_001
Site ID: S2016MD003001

Pedon ID: S2016MD003001

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0801
Soil Name as Described/Sampled: Woodstown
Classification: Fine-loamy, mixed, active, mesic Aquic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Adelphia, Annapolis, Colemanstown, Collington, Cumberstone, Deale, Donlonton, Holmdel, Shadoak, Shrewsbury
Physiographic Division: Appalachian Highlands
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:

Local Physiographic Area: SERC
Geomorphic Setting: on backslope of riser of side slope of coastal plain
on backslope of riser of side slope of upland
on backslope of riser of side slope of fluviomarine terrace
Upslope Shape: convex
Cross Slope Shape: linear
Particle Size Control Section: 23 to 66 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 23 cm.
argillic horizon 23 to 66 cm.
aquic conditions 23 to 88 cm.
redox depletions with chroma 2 or less 41 to 66 cm.
redox concentrations 41 to 88 cm.
reduced matrix 66 to 88 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: AdB -- Adelphia-Holmdel complex, 2 to 5 percent slopes
Pit Location: Plot ID SERC_001 Distance: 11.0 meters Compass Bearing: 225 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled
Quad Name: Deale, Maryland
Std Latitude: 38.8684333
Std Longitude: -76.5338139

Latitude: 38 degrees 52 minutes 6.36 seconds north
Longitude: 76 degrees 32 minutes 1.73 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 366935 meters
UTM Northing: 4303295 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: silty eolian and/or silty fluviomarine deposits
Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
S2016MD003001

Pedon ID: S2016MD003001

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<th>Slope (%)</th>
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A--0 to 8 centimeters (0.0 to 3.1 inches); dark brown (10YR 3/3) fine sandy loam; weak fine subangular blocky structure; friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; clear smooth boundary. Lab sample # 16N03559

BA--8 to 23 centimeters (3.1 to 9.1 inches); brown (10YR 4/3) fine sandy loam; 16 percent clay; weak medium granular structure; friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout; very fine vesicular pores; 3 percent glauconite pellets throughout; clear smooth boundary. Lab sample # 16N03560

Bt1--23 to 41 centimeters (9.1 to 16.1 inches); dark yellowish brown (10YR 4/6) loam; 25 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; very fine roots throughout and medium roots throughout; very fine vesicular pores; 5 percent fine irregular 10YR 5/3), moist, iron depletions Throughout; 3 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03561

Bt2--41 to 66 centimeters (16.1 to 26.0 inches); brown (7.5YR 4/4) clay loam; 28 percent clay; 3 percent coarse spherical (2.5YR4) and 10 percent very fine irregular (10YR 4/2) mottles; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; very fine roots throughout and fine roots throughout; very fine vesicular pores; 15 percent faint 10YR 4/6), moist, clay films on all faces of peds; 15 percent irregular 7.5YR 4/6), moist, masses of oxidized iron Throughout and 30 percent irregular 2.5Y 3/2), moist, iron depletions Throughout; 10 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03562

BCtg--66 to 88 centimeters (26.0 to 34.6 inches); light brownish gray (2.5Y 6/2) silt loam; 23 percent clay; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; very fine roots throughout and medium roots throughout and fine roots throughout; 15 percent faint 2.5Y 5/2), moist, clay films on all faces of peds; 5 percent irregular 5YR 5/6), moist, masses of oxidized iron Throughout and 10 percent irregular 7.5YR 5/6), moist, masses of oxidized iron Throughout; 20 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03563

Ab--88 to 100 centimeters (34.6 to 39.4 inches); very dark grayish brown (2.5Y 3/2) silt loam; 28 percent clay; moderate thin platy structure; firm, slightly sticky, slightly plastic; very fine roots throughout; 15 percent faint 2.5Y 6/3), moist, clay films on all faces of peds; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 16N03564
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 5 2016  
Describer: Greg Taylor  
NEON Plot ID: SERC_004  
Site ID: S2016MD003004

Pedon ID: S2016MD003004

Site Note:

Pedon Note:
Lab Source ID: KSSL  
Lab Pedon #: 16N0802  
Soil Name as Described/Sampled: Collington  
Classification: Fine-loamy, mixed, active, mesic Typic Hapludults

Soil Name as Correlated:

Classification:  
Pedon Type: correlates to named soil  
Pedon Purpose: research site  
Taxon Kind: series  
Associated Soils: Adelphia, Annapolis, Colemantown, Dodon, Donlonton, Holmdel, Marr, Shrewsbury, Westphalia, Wist

Physiographic Division: Atlantic Plain  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:

Local Physiographic Area: SERC  
Geomorphic Setting: on backslope of interfluve of coastal plain on backslope of interfluve of upland on backslope of interfluve of hill on backslope of interfluve of interfluve

Upslope Shape: linear  
Cross Slope Shape: convex  
Particle Size Control Section: 13 to 63 cm.  
Description origin: NASIS  
Diagnostic Features: ochric epipeds 0 to 13 cm. argillic horizon 13 to 67 cm.  

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: CRD -- Collington and Annapolis soils, 10 to 15 percent slopes

Pit Location: Pit ID SERC_004 Distance: 5.9 meters Compass Bearing: 350 degrees Reference Point: from the 20x20 NE marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled

Quad Name: Deale, Maryland  
Std Latitude: 38.8726000  
Std Longitude: -76.5539000

Latitude: 38 degrees 52 minutes 21.36 seconds north  
Longitude: 76 degrees 33 minutes 14.04 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 365201 meters  
UTM Northing: 4303786 meters

Primary Earth Cover: Tree cover  
Secondary Earth Cover: Hardwoods  
Existing Vegetation:  
Parent Material: glauconite bearing eolian and/or fluviomarine deposits

Bedrock Kind:  

Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
Table: Site and Pedon Information

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<th>Slope (%)</th>
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<th>Aspect (deg)</th>
<th>MAAT (C)</th>
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Ap--0 to 13 centimeters (0.0 to 5.1 inches): very dark brown (10YR 2/2) loam, very dark grayish brown (10YR 3/2), dry; weak medium subangular blocky structure; friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout and coarse roots throughout; very fine vesicular pores; moderately acid, pH 5.8, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03565

Bt1--13 to 43 centimeters (5.1 to 16.9 inches): dark brown (7.5YR 3/4) clay loam; 30 percent clay; weak coarse subangular blocky structure; firm, moderately sticky, slightly plastic; very fine roots throughout and medium roots throughout and coarse roots throughout; very fine vesicular pores; 45 percent distinct 10YR 4/6), moist, clay films on all faces of peds; 15 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03566

Bt2--43 to 67 centimeters (16.9 to 26.4 inches): brown (7.5YR 4/4) sandy clay loam; 23 percent clay; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; medium roots throughout and fine roots throughout; very fine vesicular pores; 10 percent distinct 10YR 4/6), moist, clay films on vertical faces of peds; 20 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03567

BC--67 to 100 centimeters (26.4 to 39.4 inches): 80 percent grayish brown (2.5Y 5/2) and 20 percent dark brown (7.5YR 3/4) fine sandy loam; weak medium subangular blocky structure; very friable, nonsticky, nonplastic; very fine roots throughout and fine roots throughout; medium tubular pores; 50 percent glauconite pellets throughout and 15 percent glauconite pellets throughout; moderately acid, pH 5.6, pH indicator solutions. Lab sample # 16N03568
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 7 2016
Describer: Dean Shields, Carl Robinette, Phil King, Greg Taylor, Chad Ferguson, Ben Marshall, Mark Van Lear, and Rob Tunstead

NEON Site: SERC

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: AsC -- Annapolis fine sandy loam, 5 to 10 percent slopes

Pedon ID: S2016MD003006
Site ID: S2016MD003006

Site Note:

Pedon Note:

Lab Source ID: KSSL
Lab Pedon #:  
Soil Name as Described/Sampled: Adelphia
Classification: Fine-loamy, mixed, active, nonacid, mesic Aquic Hapludults

Soil Name as Correlated:  
Classification: 
Pedon Type: representative pedon for component
Pedon Purpose: ecological site data
Taxon Kind: series
Associated Soils: Annapolis, Collington, Donlonton

Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area: 
Local Physiographic Area: SERC

Geomorphic Setting: on shoulder of riser of coastal plain
on shoulder of riser of fluviomarine terrace
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 20 to 70 cm.
Description origin: NASIS
Diagnotic Features: ochric epipedon 0 to 20 cm.
argillic horizon 20 to 100 cm.
aquic conditions 20 to 100 cm.
redox concentrations 52 to 100 cm.

Latitude: 38 degrees 52 minutes 52.38 seconds north
Longitude: 76 degrees 32 minutes 49.52 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365808 meters
UTM Northing: 4304733 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation: 
Parent Material: fine-loamy fluviomarine deposits
Bedrock Kind: 
Bedrock Depth: 
Bedrock Hardness: 
Bedrock Fracture Interval: 
Surface Fragments: 
Description database: MLRA03_Raleigh
### Soil Profile Description

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<th>Aspect (deg)</th>
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A--0 to 7 centimeters (0.0 to 2.8 inches); dark brown (10YR 3/3) interior loam, grayish brown (10YR 5/2) interior, dry; 36 percent sand; 13 percent clay; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary.

Ap--7 to 20 centimeters (2.8 to 7.9 inches); brown (10YR 4/3) interior loam, brown (10YR 5/3) interior, dry; 17 percent clay; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout; moderately acid, pH 5.6, pH indicator solutions; clear smooth boundary.

Bt1--20 to 52 centimeters (7.9 to 20.5 inches); dark yellowish brown (10YR 4/6) interior loam; 21 percent clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; very fine roots throughout and fine roots throughout; strongly acid, pH 5.3, pH indicator solutions; clear wavy boundary.

Bt2--52 to 100 centimeters (20.5 to 39.4 inches); dark yellowish brown (10YR 4/6) interior loam; 23 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, nonplastic; very fine roots throughout and fine roots throughout; 7 percent medium faint irregular 7.5YR 4/6), moist, iron-manganese masses with clear boundaries Throughout and 10 percent medium distinct irregular 10YR 5/3), moist, iron depletions with clear boundaries Throughout; strongly acid, pH 5.1, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 19 2016
Describer: Dean Shields
NEON Plot ID: SERC_007
Site ID: S2016MD003007

Pedon ID: S2016MD003007

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0804
Soil Name as Described/Sampled: Donlonton
Classification: Fine-loamy, glauconitic, mesic Aquic Hapludults

Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Adelphia, Annapolis, Colemantown, Collington, Dodon, Holmdel, Marr, Shrewsbury, Westphalia, Wist
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:

Local Physiographic Area: SERC
Geomorphic Setting: on shoulder of riser of fluviomarine terrace
on shoulder of riser of coastal plain
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 29 to 75 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 29 cm.
redox concentrations 29 to 100 cm.
argillic horizon 29 to 75 cm.
aquic conditions 29 to 100 cm.
redox depletions with chroma 2 or less 58 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: AsB -- Annapolis fine sandy loam, 2 to 5 percent slopes
Pit Location: Plot ID SERC_007 No plot marker found Distance: meters Compass Bearing: degrees
Reference Point: from the marker Measurement Location: to the pit face that was sampled
Remarks: Locate use Latitude 38 52 25.8871
Longitude 76 32 23.5895 for pit location; flagged
with yellow orange or pink pin flag marking pit face
sampled
Quad Name: Deale, Maryland
Std Latitude: 38.8738556
Std Longitude: -76.5398833

Latitude: 38 degrees 52 minutes 25.88 seconds north
Longitude: 76 degrees 32 minutes 23.58 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 366416 meters
UTM Northing: 4303903 meters

Primary Earth Cover: Crop cover
Secondary Earth Cover: Row crop
Existing Vegetation:
Parent Material: loamy glauconitic fluviomarine deposits
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
Ap--0 to 29 centimeters (0.0 to 11.4 inches); brown (10YR 4/3) sandy clay loam, light olive brown (2.5Y 4/3), dry; 22 percent clay; weak medium subangular blocky, and moderate medium granular structure; very firm, slightly sticky, nonplastic; very fine roots throughout; 25 percent glauconite pellets throughout; slightly acid, pH 6.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03573

Bt1--29 to 58 centimeters (11.4 to 22.8 inches); yellowish brown (10YR 5/6) clay loam; 32 percent clay; strong coarse subangular blocky structure; friable; very fine roots throughout; 35 percent distinct 10YR 4/3), moist, clay films on all faces of peds; 5 percent irregular 2.5Y 6/3), moist, iron depletions and 10 percent irregular 7.5YR 5/6), moist, masses of oxidized iron; 25 percent glauconite pellets throughout; moderately acid, pH 5.8, pH indicator solutions; clear smooth boundary. Lab sample # 16N03574

Bt2--58 to 75 centimeters (22.8 to 29.5 inches); yellowish brown (10YR 5/4) clay loam; 30 percent clay; strong coarse subangular blocky structure; friable; very fine roots throughout; 25 percent distinct 5YR 4/4), moist, clay films on all faces of peds and 25 percent distinct 10YR 4/3), moist, clay films on all faces of peds and 10 percent distinct 10YR 4/3), moist, clay films on all faces of peds; 5 percent irregular 2.5Y 6/2), moist, iron depletions and 15 percent irregular 5YR 4/6), moist, masses of oxidized iron; 25 percent glauconite pellets throughout; 2 percent nonflat rounded strongly cemented 25 to 30-millimeter Quartz fragments; strongly acid, pH 5.4, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03575

BCt--75 to 100 centimeters (29.5 to 39.4 inches); pale brown (10YR 6/3) loam; 23 percent clay; strong medium subangular blocky structure; friable; very fine roots throughout; 10 percent distinct 5YR 4/4), moist, clay films on all faces of peds and 10 percent distinct 10YR 4/3), moist, clay films on all faces of peds; 10 percent irregular 10YR 5/3), moist, iron depletions with clear boundaries and 10 percent irregular 7.5YR 4/6), moist, iron-manganese masses with clear boundaries; 40 percent glauconite pellets throughout; 10 percent nonflat rounded strongly cemented 2 to 5-millimeter Quartz fragments; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 16N03576
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 7 2016
Describer: Phil King, Chad Ferguson, Greg Taylor, Ben Marshall, Dave Verdone, Mark Van Lear, Dean Shields and Rob Tunstead

NEON Plot ID: SERC_009
Site ID: S2016MD003009

Pedon ID: S2016MD003009

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 
Soil Name as Described/Sampled: Marr
Classification: Fine-loamy, siliceous, semiactive, mesic Oxyaquic Hapludults
Soil Name as Correlated:

Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: ecological site data
Taxon Kind: taxadjunct
Associated Soils: Dodon, Piccowaxen
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area: 
Local Physiographic Area: SERC
Geomorphic Setting: on backslope of side slope of coastal plain on backslope of side slope of interfluve
Upslope Shape: linear
Cross Slope Shape: convex
Particle Size Control Section: 56 to 103 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 25 cm.
arillic horizon 56 to 100 cm.
redox concentrations 56 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: MaD -- Marr-Dodon complex, 10 to 15 percent slopes
Pit Location: Plot ID SERC_009 Distance: 8.6 meters Compass Bearing: 220 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled
Quad Name: South River, Maryland
Std Latitude: 38.8974056
Std Longitude: -76.5615472

Latitude: 38 degrees 53 minutes 50.66 seconds north
Longitude: 76 degrees 33 minutes 41.57 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 364584 meters
UTM Northing: 4306551 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: fine-loamy fluviomarine deposits
Bedrock Kind: 
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: MLRA03_Raleigh
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<th>Aspect (deg)</th>
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A--0 to 14 centimeters (0.0 to 5.5 inches); very dark gray (10YR 3/1) interior fine sandy loam, grayish brown (10YR 5/2) interior, dry; 7 percent clay; weak fine granular parts to weak fine subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; neutral, pH 6.8, pH indicator solutions; clear smooth boundary.

Ap--14 to 25 centimeters (5.5 to 9.8 inches); very dark grayish brown (10YR 3/2) interior fine sandy loam, pale brown (10YR 6/3) interior, dry; 11 percent clay; weak medium subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; moderately acid, pH 5.8, pH indicator solutions; clear wavy boundary.

BA--25 to 39 centimeters (9.8 to 15.4 inches); dark yellowish brown (10YR 4/4) interior fine sandy loam; 12 percent clay; weak medium subangular blocky structure; very friable; very fine roots throughout and medium roots throughout and fine roots throughout and coarse roots throughout; moderately acid, pH 5.6, pH indicator solutions; clear wavy boundary.

BE--39 to 56 centimeters (15.4 to 22.0 inches); dark yellowish brown (10YR 4/6) interior fine sandy loam; 15 percent clay; weak medium subangular blocky structure; friable; very fine roots throughout and fine roots throughout; 15 percent faint 10YR 4/4), moist, clay films on all faces of peds; strongly acid, pH 5.2, pH indicator solutions; clear wavy boundary.

Bt--56 to 100 centimeters (22.0 to 39.4 inches); strong brown (7.5YR 4/6) interior loam; 23 percent clay; moderate medium subangular blocky structure; friable; very fine roots throughout and fine roots throughout; 15 percent distinct 10YR 4/4), moist, clay films on all faces of peds; 5 percent medium prominent irregular 10YR 6/3), moist, iron depletions Throughout and 10 percent medium faint irregular 5YR 4/6), moist, iron-manganese masses Throughout; strongly acid, pH 5.2, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 8 2016
Describer: Mark Van Lear, Ben Marshall and Dean Shields
NEON Plot ID: SERC_010
Site ID: S2016MD003010

Pedon ID: S2016MD003010

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 
Soil Name as Described/Sampled: Wist
Classification: Fine-loamy, mixed, subactive, mesic Aquic Hapludults

Soil Name as Correlated:
Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: ecological site data
Taxon Kind: taxadjunct
Associated Soils: Adelphia, Collington
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:
Local Physiographic Area: SERC
Geomorphic Setting: on footslope of base slope of coastal plain on footslope of base slope of hillslope
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 49 to 99 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 27 cm.
argillic horizon 49 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: CoC -- Collington-Wist complex, 5 to 10 percent slopes
Pit Location: Plot ID SERC_010 Distance: 17.1 meters Compass Bearing: 333 degrees Reference Point: from the 20x20 NW marker Measurement Location: to the pit face that was sampled Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sample Sampled soil pit location was 17 meters from the southwest inner 20 meter flag pole (1 orange and 1 blue) that was pre-located by NEON personnel. Azimuth from the 20 meter flag to the soil pit was 344 degrees (northwest).
Quad Name: South River, Maryland
Std Latitude: 38.9096389
Std Longitude: -76.5464722

Latitude: 38 degrees 54 minutes 34.70 seconds north
Longitude: 76 degrees 32 minutes 47.30 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365915 meters
UTM Northing: 4307886 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: fine-loamy fluviomarine deposits
Bedrock Kind: 
Bedrock Depth: 
Bedrock Hardness: 
Bedrock Fracture Interval: 
Surface Fragments: 
Description database: MLRA03_Raleigh
A--0 to 11 centimeters (0.0 to 4.3 inches); very dark grayish brown (10YR 3/2) interior fine sandy loam; 10 percent clay; moderate medium granular structure; very friable, nonsticky, nonplastic; medium roots throughout and fine roots throughout; neutral, pH 6.6, pH indicator solutions; clear smooth boundary.

Ap--11 to 27 centimeters (4.3 to 10.6 inches); brown (10YR 4/3) interior fine sandy loam; 12 percent clay; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; medium roots throughout and coarse roots throughout; slightly acid, pH 6.2, pH indicator solutions; clear smooth boundary.

BE--27 to 49 centimeters (10.6 to 19.3 inches); dark yellowish brown (10YR 4/4) interior sandy loam; 10 percent clay; weak medium subangular blocky structure; very friable, nonsticky, nonplastic; fine roots throughout; 3 percent coarse prominent cylindrical 2.5YR 4/8), moist, iron-manganese masses with sharp boundaries Throughout; moderately acid, pH 6.0, pH indicator solutions; clear wavy boundary.

Bt1--49 to 78 centimeters (19.3 to 30.7 inches); yellowish brown (10YR 5/4) interior sandy loam; 15 percent clay; weak medium subangular blocky structure; very friable, slightly sticky, slightly plastic; fine roots throughout; 15 percent faint 10YR 4/4), moist, clay films on all faces of peds; slightly acid, pH 6.2, pH indicator solutions; clear wavy boundary.

Bt2--78 to 100 centimeters (30.7 to 39.4 inches); yellowish brown (10YR 5/4) interior clay loam; 27 percent clay; moderate coarse subangular blocky structure; friable, moderately sticky, moderately plastic; fine roots throughout; 25 percent distinct 7.5YR 4/4), moist, clay films on all faces of peds; 5 percent medium prominent irregular 7.5YR 5/8), moist, iron-manganese masses with clear boundaries Throughout and 15 percent medium distinct irregular 10YR 6/2), moist, iron depletions with clear boundaries Throughout; 10 percent fine glauconite pellets throughout; moderately acid, pH 5.6, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 6 2016
Describer: Phil King
NEON Plot ID: SERC_011
Site ID: S2016MD003011

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: MaD -- Marr-Dodon complex, 10 to 15 percent slopes
Pit Location: Plot ID SERC_011 Distance: 16.3 meters Compass Bearing: 333 degrees Reference Point: from the 20x20 NW marker Measurement Location: to the pit face that was sampled Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled
Quad Name: South River, Maryland
Std Latitude: 38.8985889
Std Longitude: -76.5511889
Latitude: 38 degrees 53 minutes 54.92 seconds north
Longitude: 76 degrees 33 minutes 4.28 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365485 meters
UTM Northing: 4306667 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: loamy fluviomarine deposits
Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
### Soil Profile Description

<table>
<thead>
<tr>
<th>Layer</th>
<th>Texture</th>
<th>Depth Range (cm)</th>
<th>Color</th>
<th>Clay %</th>
<th>Structure</th>
<th>Roots</th>
<th>pH</th>
<th>pH Indicators</th>
<th>Boundary Description</th>
<th>Lab Sample #</th>
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<tr>
<td>Ap</td>
<td>sandy clay loam</td>
<td>9 to 29</td>
<td>dark yellowish brown (10YR 3/4)</td>
<td>12</td>
<td>weak medium subangular blocky, weak fine subangular blocky structure; friable; coarse roots throughout</td>
<td>coarse</td>
<td>6.2</td>
<td>neutral, pH indicator solutions</td>
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<td>BE</td>
<td>sandy loam</td>
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<td>brown (7.5YR 4/4)</td>
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<td>moderate coarse subangular blocky structure; friable; common fine roots</td>
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<td>5.4</td>
<td>strongly acid, pH indicator solutions</td>
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PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 5 2016  
Describer: Greg Taylor  
NEON Plot ID: SERC_012  
Site ID: S2016MD003012

Pedon ID: S2016MD003012

Site Note:

Pedon Note:
Lab Source ID: KSSL  
Lab Pedon #: 16N0808  
Soil Name as Described/Sampled: Collington  
Classification: Fine-loamy, mixed, active, mesic Typic Hapludults

Soil Name as Correlated:
Classification:  
Pedon Type: correlates to named soil  
Pedon Purpose: research site  
Taxon Kind: series
Associated Soils: Adelphia, Annapolis, Colemanstown, Collington, Dodon, Donlonton, Holmdel, Westphalia, Wist  
Physiographic Division: Appalachian Highlands  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:

Local Physiographic Area: SERC  
Geomorphic Setting: on backslope of side slope of coastal plain  
on backslope of side slope of upland  
on backslope of side slope of hill  
Upslope Shape: convex  
Cross Slope Shape: linear
Particle Size Control Section: 34 to 84 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 34 cm.  
argllicic horizon 34 to 93 cm.

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: CSE -- Collington, Wist, and Westphalia soils, 15 to 25 percent slopes

Pit Location: Plot ID SERC_012 Distance: 4.15 meters Compass Bearing: 162 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled

Quad Name: South River, Maryland
Std Latitude: 38.8785778  
Std Longitude: -76.5611583

Latitude: 38 degrees 52 minutes 42.88 seconds north  
Longitude: 76 degrees 33 minutes 40.17 seconds west
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 364582 meters  
UTM Northing: 4304461 meters

Primary Earth Cover: Tree cover  
Secondary Earth Cover: Hardwoods  
Existing Vegetation:
Parent Material: glauconite bearing eolian and/or fluviomarine deposits
Bedrock Kind:

Bedrock Depth:

Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
Ap--0 to 21 centimeters (0.0 to 8.3 inches); very dark grayish brown (10YR 3/2) fine sandy loam; weak fine subangular blocky structure; very friable, nonsticky, nonplastic; very fine roots throughout and fine roots throughout; coarse roots throughout; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary. Lab sample # 16N03592

BE--21 to 34 centimeters (8.3 to 13.4 inches); yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; very friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout; very fine vesicular pores; 3 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03593

Bt1--34 to 70 centimeters (13.4 to 27.6 inches); strong brown (7.5YR 5/6) clay loam; 33 percent clay; medium medium subangular blocky structure; firm, moderately sticky, moderately plastic; medium roots throughout and fine roots throughout; very fine vesicular pores; 3 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary. Lab sample # 16N03594

Bt2--70 to 93 centimeters (27.6 to 36.6 inches); strong brown (7.5YR 5/6) clay loam; 35 percent clay; 3 percent coarse spherical (2.5YR4) and 10 percent very fine irregular (10YR 4/2) mottles; moderate medium subangular blocky structure; firm, slightly sticky, nonplastic; very coarse roots throughout and medium roots throughout; very fine vesicular pores; 10 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03595

BCT--93 to 100 centimeters (36.6 to 39.4 inches); 80 percent strong brown (7.5YR 5/6) and 20 percent 10YR 2.5/1 (10YR 2.5/1) very gravelly sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, nonplastic; medium roots throughout; 20 percent glauconite pellets throughout; 35 percent nonflat subrounded strongly cemented 2 to 76-millimeter unspecified fragments; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 16N03596
**PEDON DESCRIPTION -- NEON Site SERC**

**Print Date:** Nov 5 2017  
**Description Date:** Apr 19 2016  
**Describer:** Dean Shields  
**NEON Plot ID:** SERC_013  
**Site ID:** S2016MD003013

**Pedon ID:** S2016MD003013

**Site Note:**

**Pedon Note:**
- **Lab Source ID:** KSSL  
- **Lab Pedon #:** 16N0809  
- **Soil Name as Described/Sampled:** Donlonton  
- **Classification:** Fine-loamy, glauconitic, mesic Aquic Hapludults

**Soil Name as Correlated:**
- **Classification:**  
- **Pedon Type:** correlates to named soil  
- **Pedon Purpose:** research site  
- **Taxon Kind:** series  
- **Associated Soils:** Adelphia, Annapolis, Colemanstown, Collington, Dodon, Holmdel, Marr, Shrewsbury, Westphalia, Wist  
- **Physiographic Division:** Atlantic Plain  
- **Physiographic Province:** Coastal Plain  
- **Physiographic Section:** Embayed section  
- **State Physiographic Area:**

**Local Physiographic Area:** SERC  
**Geomorphic Setting:** on backslope of side slope of coastal plain on backslope of side slope of hillslope  
**Upslope Shape:** linear  
**Cross Slope Shape:** convex  
**Particle Size Control Section:** 10 to 60 cm.  
**Description origin:** NASIS

**Diagnostic Features:** ochric epipedon 0 to 10 cm.  
argillic horizon 10 to 68 cm.  
aquic conditions 34 to 100 cm.  
redox concentrations 34 to 100 cm.  
redox depletions with chroma 2 or less 68 to 100 cm.

**Country:** United States  
**State:** Maryland  
**County:** Anne Arundel  
**MLRA:** 149A -- Northern Coastal Plain  
**Soil Survey Area:** MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
**Map Unit:** SsA -- Shrewsbury loam, 0 to 2 percent slopes  
**Pit Location:** Plot ID SERC_013 Distance: 11.2 meters Compass Bearing: 170 degrees Reference Point: from the 20x20 SE marker Measurement Location: to the pit face that was sampled  
**Remarks:** flagged with yellow orange or pink pin flag marking pit face sampled PDOP 2.3

**Quad Name:** Deale, Maryland  
**Std Latitude:** 38.871667  
**Std Longitude:** -76.5442278

**Latitude:** 38 degrees 52 minutes 18.00 seconds north  
**Longitude:** 76 degrees 32 minutes 39.22 seconds west  
**Datum:** WGS84  
**UTM Zone:** 18  
**UTM Easting:** 366038 meters  
**UTM Northing:** 4303669 meters

**Primary Earth Cover:** Tree cover  
**Secondary Earth Cover:** Hardwoods  
**Existing Vegetation:**  
**Parent Material:** loamy glauconitic fluvimarine deposits  
**Bedrock Kind:**  
**Bedrock Depth:**  
**Bedrock Hardness:**  
**Bedrock Fracture Interval:**  
**Surface Fragments:**  
**Description database:** KSSL
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<th>Slope (%)</th>
<th>Elevation (meters)</th>
<th>Aspect (deg)</th>
<th>MAAT (°C)</th>
<th>MSAT (°C)</th>
<th>MWAT (°C)</th>
<th>MAP (mm)</th>
<th>Frost-Free Days</th>
<th>Drainage Class</th>
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<th>Upslope Length (meters)</th>
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<td>moderately well</td>
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A--0 to 10 centimeters (0.0 to 3.9 inches); 50 percent very dark grayish brown (10YR 3/2) and 50 percent brown (10YR 4/3) loam; 23 percent clay; moderate medium granular parts to weak fine subangular blocky structure; friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout; 10 percent glauconite pellets; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03597

Bt1--10 to 34 centimeters (3.9 to 13.4 inches); dark yellowish brown (10YR 4/4) loam; 25 percent clay; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; very fine roots throughout and very coarse roots throughout and medium roots throughout; 15 percent faint 10YR 3/4), moist, clay films on all faces of peds; 25 percent glauconite pellets; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary. Lab sample # 16N03598

Bt2--34 to 68 centimeters (13.4 to 26.8 inches); dark yellowish brown (10YR 4/4) sandy clay loam; 25 percent clay; strong coarse subangular blocky structure; friable, moderately sticky, moderately plastic; very coarse roots throughout and fine roots throughout; 70 percent prominent 10YR 4/6), moist, clay films on all faces of peds; 10 percent medium irregular 10YR 5/3), moist, iron depletions and 10 percent medium irregular 10YR 5/6), moist, masses of oxidized iron; 50 percent glauconite pellets; strongly acid, pH 5.2, pH indicator solutions; clear wavy boundary. Lab sample # 16N03599

BCt--68 to 100 centimeters (26.8 to 39.4 inches); 70 percent light yellowish brown (2.5Y 6/3) and 30 percent light olive brown (2.5Y 5/3) loam; 21 percent clay; strong coarse subangular blocky structure; firm, slightly sticky, slightly plastic; very coarse roots throughout and fine roots throughout; 40 percent faint 10YR 4/3), moist, clay films on all faces of peds; 5 percent medium irregular 10YR 5/2), moist, iron depletions and 10 percent medium irregular 10YR 3/6), moist, masses of oxidized iron and 10 percent jarosite masses; 70 percent glauconite pellets; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 16N03600
**PEDON DESCRIPTION -- NEON Site SERC**

**Print Date:** Nov 5 2017  
**Description Date:** Apr 19 2016  
**Describer:** Chris Seitz, Phil King, Dave Verdone, and Carl Robinette  
**NEON Plot ID:** SERC_014  
**Site ID:** S2016MD003014

**Pedon ID:** S2016MD003014

**Site Note:**

**Pedon Note:**  
**Lab Source ID:** KSSL  
**Lab Pedon #:**

**Soil Name as Described/Sampled:** Donlonton  
**Classification:** Fine-loamy, glauconitic, semiactive, mesic Aquic Hapludults

**Soil Name as Correlated:**

**Classification:**  
**Pedon Type:** correlates to named soil  
**Pedon Purpose:** ecological site data  
**Taxon Kind:** series  
**Associated Soils:** Annapolis, Colemantown

**Physiographic Division:** Atlantic Plain  
**Physiographic Province:** Coastal Plain  
**Physiographic Section:** Embayed section  
**State Physiographic Area:**

**Local Physiographic Area:** SERC  
**Geomorphic Setting:** on tread of fluviomarine terrace  
**Upslope Shape:** linear  
**Cross Slope Shape:** linear  
**Particle Size Control Section:** 41 to 82 cm.  
**Description origin:** NASIS

**Diagnostic Features:** ochric epipedon 0 to 25 cm.  
  aquic conditions 25 to 100 cm.  
  redox depletions with chroma 2 or less 25 to 100 cm.  
  argillic horizon 41 to 82 cm.  
  redox concentrations 41 to 100 cm.

**Country:** United States  
**State:** Maryland  
**County:** Anne Arundel  
**MLRA:** 149A -- Northern Coastal Plain  
**Soil Survey Area:** MD003 -- Anne Arundel County, Maryland  
**3-HAM** -- Hammonton, New Jersey  
**Map Unit:** AdB -- Adelphia-Holmdel complex, 2 to 5 percent slopes  
**Pit Location:** Plot ID SERC_014 Distance: 9.5 meters Compass Bearing: 180 degrees Reference Point: from the 40x40 NW marker Measurement Location: to the pit face that was sampled  
**Remarks:** flagged with yellow orange or pink pin flag marking pit face sampled  
**Quad Name:** South River, Maryland  
**Std Latitude:** 38.8758610  
**Std Longitude:** -76.5413610

**Latitude:** 38 degrees 52 minutes 33.10 seconds north  
**Longitude:** 76 degrees 32 minutes 28.90 seconds west  
**Datum:** WGS84  
**UTM Zone:** 18  
**UTM Easting:** 366294 meters  
**UTM Northing:** 4304130 meters

**Primary Earth Cover:** Tree cover  
**Secondary Earth Cover:** Hardwoods  
**Existing Vegetation:**

**Parent Material:** glauconitic fine-loamy fluviomarine deposits  
**Bedrock Kind:**

**Bedrock Depth:**

**Bedrock Hardness:**

**Bedrock Fracture Interval:**

**Surface Fragments:**

**Description database:** MLRA03_Raleigh
Slope | Elevation | Aspect | MAAT | MSAT | MWAT | MAP | Frost-Free Days | Drainage Class | Slope Length | Upslope Length
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1.0 | 2.0 | 320 |  |  |  |  |  | moderately well |  |  |

A--0 to 14 centimeters (0.0 to 5.5 inches); very dark grayish brown (10YR 3/2) interior fine sandy loam, grayish brown (10YR 5/2) interior, dry; 6 percent clay; strong fine granular structure; very friable, nonsticky, nonplastic; medium roots throughout and fine roots throughout and coarse roots throughout; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary.

Ap--14 to 25 centimeters (5.5 to 9.8 inches); dark brown (10YR 3/3) interior fine sandy loam, pale brown (10YR 6/3) interior, dry; 6 percent clay; moderate fine subangular blocky structure; very friable, nonsticky, nonplastic; medium roots throughout and fine roots throughout and coarse roots throughout; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary.

BE--25 to 41 centimeters (9.8 to 16.1 inches); olive brown (2.5Y 4/3) interior fine sandy loam; 15 percent clay; moderate medium subangular blocky structure; friable, slightly sticky, moderately plastic; medium roots throughout and fine roots throughout and coarse roots throughout; 5 percent fine distinct irregular 2.5Y 5/2), moist, iron depletions with clear boundaries Throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary.

Bt--41 to 82 centimeters (16.1 to 32.3 inches); brown (10YR 4/3) interior sandy clay loam; 24 percent clay; moderate medium subangular blocky structure; friable, slightly sticky, moderately plastic; medium roots throughout and fine roots throughout and coarse roots throughout; 5 percent medium prominent irregular 7.5YR 4/6), moist, iron-manganese masses with clear boundaries Throughout and 10 percent medium faint irregular 2.5Y 5/2), moist, iron depletions with clear boundaries Throughout; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary.

BCt--82 to 100 centimeters (32.3 to 39.4 inches); brown (10YR 4/3) interior sandy loam; 17 percent clay; weak very coarse prismatic parts to weak fine subangular blocky, and weak very coarse prismatic parts to weak medium subangular blocky structure; friable, slightly sticky, moderately plastic; very fine roots throughout; 23 percent medium faint irregular 2.5Y 4/2), moist, iron depletions with clear boundaries Throughout and 23 percent medium distinct irregular 5YR 4/4), moist, iron-manganese masses with clear boundaries Throughout; strongly acid, pH 5.4, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 7 2016  
Describer: Dean Shields  
NEON Plot ID: SERC_019  
Site ID: S2016MD003019

Pedon ID: S2016MD003019

Site Note:

Pedon Note:  
Lab Source ID: KSSL  
Lab Pedon #: 16N0811  
Soil Name as Described/Sampled: Donlonton  
Classification: Fine-loamy, glauconitic, mesic Aquic Hapludults

Soil Name as Correlated:

Classification:  
Pedon Type: correlates to named soil  
Pedon Purpose: research site  
Taxon Kind: series  
Associated Soils: Adelphia, Annapolis, Colemanstown, Collington, Dodon, Holmdel, Marr, Shrewsbury, Westphalia, Wist  
Physiographic Division: Atlantic Plain  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:  
Local Physiographic Area: SERC  
Geomorphic Setting: on footslope of base slope of hillslope  
on footslope of base slope of coastal plain  
Upslope Shape: linear  
Cross Slope Shape: concave  
Particle Size Control Section: 30 to 78 cm.  
Description origin: NASIS  
Diagnostic Features: ochric epipedon 0 to 30 cm.  
argillic horizon 30 to 78 cm.  
aquic conditions 54 to 100 cm.  
redox concentrations 54 to 100 cm.  
redox depletions with chroma 2 or less 54 to 100 cm.  

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: SsA -- Shrewsbury loam, 0 to 2 percent slopes  
Pit Location: Plot ID SERC_019 Distance: 3.2 meters Compass Bearing: 264 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag marking pit face sampled  
Quad Name: Deale, Maryland  
Std Latitude: 38.8715861  
Std Longitude: -76.5509528  
Latitude: 38 degrees 52 minutes 17.71 seconds north  
Longitude: 76 degrees 33 minutes 3.43 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 365454 meters  
UTM Northing: 4303670 meters  
Primary Earth Cover: Tree cover  
Secondary Earth Cover: Hardwoods  
Existing Vegetation:  
Parent Material: loamy glauconitic fluviomarine deposits  
Bedrock Kind:  
Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
A--0 to 10 centimeters (0.0 to 3.9 inches); black (2.5Y 2.5/1) fine sandy loam; 12 percent clay; moderate fine granular structure; friable; very fine roots throughout and fine roots throughout; moderately acid, pH 6.0, pH indicator solutions; clear smooth boundary. Lab sample # 16N03606

Ap--10 to 30 centimeters (3.9 to 11.8 inches); dark olive brown (2.5Y 3/3) sandy loam; 13 percent clay; moderate fine subangular blocky structure; friable; very coarse roots throughout and medium roots throughout; 20 percent glauconite pellets; moderately acid, pH 5.6, pH indicator solutions; clear smooth boundary. Lab sample # 16N03607

Bt1--30 to 54 centimeters (11.8 to 21.3 inches); olive brown (2.5Y 4/4) sandy clay loam; 22 percent clay; strong fine subangular blocky structure; friable; medium roots throughout; 30 percent distinct clay films on all faces of peds; 35 percent glauconite pellets; 1 percent nonflat rounded strongly cemented 2 to 75-millimeter Quartz fragments; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03608

Bt2--54 to 78 centimeters (21.3 to 30.7 inches); dark olive brown (2.5Y 3/3) sandy clay loam; 25 percent clay; moderate medium subangular blocky structure; friable; medium roots throughout; 10 percent distinct clay films on all faces of peds; 10 percent 7.5YR 4/6), moist, and 7.5YR 3/4), moist, masses of oxidized iron and 15 percent 2.5Y 4/1), moist, iron depletions; 55 percent glauconite pellets; strongly acid, pH 5.5, pH indicator solutions; clear smooth boundary. Lab sample # 16N03609

CBt--78 to 100 centimeters (30.7 to 39.4 inches); very dark grayish brown (2.5Y 3/2) sandy loam; 10 percent clay; weak coarse subangular blocky structure; friable; fine roots throughout; 10 percent 7.5YR 3/4), moist, masses of oxidized iron and 15 percent 2.5Y 4/1), moist, iron depletions; 70 percent glauconite pellets; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 16N03610
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 6 2016  
Describer: Phil King  
NEON Plot ID: SERC_020  
Site ID: S2016MD003020

Pedon ID: S2016MD003020

Site Note:

Pedon Note:  
Lab Source ID: KSSL  
Lab Pedon #: 16N0812  
Soil Name as Described/Sampled: Holmdel  
Classification: Fine-loamy, glauconitic, active, mesic Aquic Hapludults

Soil Name as Correlated:  
Classification:  
Pedon Type: taxadjunct to the series  
Pedon Purpose: research site  
Taxon Kind: taxadjunct  
Associated Soils: Adelphia, Colemanston, Collington, Dodon, Donlonton, Holmdel, Marr, Shrewsbury, Wist  
Physiographic Division: Atlantic Plain  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:  
Local Physiographic Area: SERC  
Geomorphic Setting: on backslope of interfluve of coastal plain  
on backslope of interfluve of upland  
on backslope of interfluve of hill  
on backslope of interfluve of interfluve  
Upslope Shape: linear  
Cross Slope Shape: convex  
Particle Size Control Section: 24 to 58 cm.  
Description origin: NASIS

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: AsB -- Annapolis fine sandy loam, 2 to 5 percent slopes

Pit Location: Plot ID SERC_020 Distance: 11.9 meters Compass Bearing: 55 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled  
Remarks: Flagged with yellow orange or pink pin flag marking pit face sampled. This site was the first open field site within a cultivated field. Diana with NEON was onsite during the pit location discussion and agreed to our selection. We were told not to worry about being within the 20x20 or even the 40x40 plots since the sites were under cultivation and could not be marked. Also the sensitiveness of these sites are not the same as the forested sites due to active farming practices.

Quad Name: Deale, Maryland  
Std Latitude: 38.8700056  
Std Longitude: -76.5360833

Latitude: 38 degrees 52 minutes 12.02 seconds north  
Longitude: 76 degrees 32 minutes 9.90 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 366741 meters  
UTM Northing: 4303472 meters

Primary Earth Cover: Crop cover  
Secondary Earth Cover: Row crop  
Existing Vegetation:  
Parent Material: loamy marine deposits  
Bedrock Kind:  

Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
Cont. Site ID: S2016MD003020  Pedon ID: S2016MD003020

**Diagnostic Features:** ochric epipedon 0 to 24 cm.
- argillic horizon 24 to 58 cm.
- redox depletions with chroma 2 or less 24 to 58 cm.
- aquic conditions 24 to 100 cm.
- redox concentrations 24 to 100 cm.
- reduced matrix 58 to 100 cm.

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Ap--0 to 24 centimeters (0.0 to 9.4 inches); 70 percent very dark gray (10YR 3/1) and 25 percent light olive brown (2.5Y 5/6) and 5 percent brown (7.5YR 4/4) loam, light olive brown (2.5Y 5/3), dry; weak fine subangular blocky, and weak medium subangular blocky structure; friable; very fine roots throughout; 30 percent glauconite pellets throughout; neutral, pH 6.8, pH indicator solutions; abrupt wavy boundary. Lab sample # 16N03611

Bt1--24 to 38 centimeters (9.4 to 15.0 inches); 90 percent olive brown (2.5Y 4/4) and 5 percent strong brown (7.5YR 4/6) sandy clay loam; 25 percent clay; moderate medium subangular blocky, and moderate coarse subangular blocky structure; friable; very fine roots throughout; 5 percent 7.5YR 5/2), moist, iron depletions; 30 percent glauconite pellets throughout; neutral, pH 6.6, pH indicator solutions; clear wavy boundary. Lab sample # 16N03612

Bt2--38 to 58 centimeters (15.0 to 22.8 inches); 60 percent dark grayish brown (2.5Y 4/2) and 30 percent strong brown (7.5YR 4/6) and 10 percent dark brown (7.5YR 3/4) sandy clay loam; 22 percent clay; weak medium subangular blocky, and weak coarse subangular blocky structure; friable; very fine roots throughout; 30 percent glauconite pellets throughout; strongly acid, pH 5.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03613

Cg1--58 to 88 centimeters (22.8 to 34.6 inches); 70 percent very dark grayish brown (2.5Y 3/2) and 30 percent strong brown (7.5YR 4/6) loamy sand; 7 percent clay; massive; friable; 90 percent glauconite pellets throughout; strongly acid, pH 5.2, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03614

Cg2--88 to 100 centimeters (34.6 to 39.4 inches); 75 percent light brownish gray (2.5Y 6/2) and 25 percent strong brown (7.5YR 5/8) clay loam; 28 percent clay; massive; friable; 40 percent glauconite pellets throughout; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 16N03615
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 5 2016
Describer: Phil King
NEON Plot ID: SERC_022
Site ID: S2016MD003022

Pedon ID: S2016MD003022

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0813
Soil Name as Described/Sampled: Dodon
Classification: Fine-loamy, siliceous, semiactive, mesic Aquic Hapludults

Soil Name as Correlated:
Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: research site
Taxon Kind: taxadjunct
Associated Soils: Adelphia, Annapolis, Colemantown, Collington, Donlonton, Holmdel, Marr, Westphalia, Wist
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:
Local Physiographic Area: SERC
Geomorphic Setting: on shoulder of side slope of coastal plain on shoulder of side slope of upland on shoulder of side slope of hill on shoulder of side slope of interfluve
Upslope Shape: convex
Cross Slope Shape: convex
Particle Size Control Section: 36 to 79 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 36 cm.
argillic horizon 36 to 79 cm.
aquic conditions 79 to 100 cm.
redox concentrations 79 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: MaD -- Marr-Dodon complex, 10 to 15 percent slopes
Pit Location: Plot ID SERC_022 Distance: 20.6 meters Compass Bearing: 356 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled
Quad Name: South River, Maryland
Std Latitude: 38.8755600
Std Longitude: -76.5548100

Latitude: 38 degrees 52 minutes 32.01 seconds north
Longitude: 76 degrees 33 minutes 17.31 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365127 meters
UTM Northing: 4304116 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: loamy marine deposits
Bedrock Kind:

Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
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Ap--0 to 13 centimeters (0.0 to 5.1 inches); very dark grayish brown (10YR 3/2) fine sandy loam; 14 percent clay; strong medium granular structure; friable, nonsticky, nonplastic; very fine roots and fine roots; strongly acid, pH 5.4, pH indicator solutions; clear smooth boundary. Lab sample # 16N03616

E--13 to 36 centimeters (5.1 to 14.2 inches); dark yellowish brown (10YR 3/4) fine sandy loam; 16 percent clay; weak medium subangular blocky structure; friable, nonsticky, nonplastic; medium roots; moderately acid, pH 5.6, pH indicator solutions; clear wavy boundary. Lab sample # 16N03617

Bt--36 to 79 centimeters (14.2 to 31.1 inches); 70 percent dark yellowish brown (10YR 4/6) and 30 percent brownish yellow (10YR 6/6) clay loam; 32 percent clay; strong medium subangular blocky, and strong fine subangular blocky structure; friable, slightly sticky, slightly plastic; medium roots; prominent 10YR 4/4), moist, clay films; moderately acid, pH 5.6, pH indicator solutions; clear wavy boundary. Lab sample # 16N03618

BCt--79 to 100 centimeters (31.1 to 39.4 inches); yellowish brown (10YR 5/6) sandy clay loam; 29 percent clay; medium prismatic parts to subangular blocky structure; friable, moderately sticky, moderately plastic; distinct 10YR 4/4), moist, clay films; 5 percent 7.5YR 4/6), moist, masses of oxidized iron and 7 percent 10YR 5/3), moist, iron depletions; moderately acid, pH 5.6, pH indicator solutions. Lab sample # 16N03619
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 4 2016  
Describer: Greg Taylor  
NEON Plot ID: SERC_025  
Site ID: S2016MD003025

Pedon ID: S2016MD003025

Site Note:

Pedon Note:
Lab Source ID: KSSL  
Lab Pedon #: 16N0814  
Soil Name as Described/Sampled: Annapolis  
Classification: Fine-loamy, glauconitic, mesic Typic Hapludults  
Soil Name as Correlated:

Classification: Fine-loamy, glauconitic, mesic Typic Hapludults  
Pedon Type: correlates to named soil  
Pedon Purpose: research site  
Taxon Kind: series  
Associated Soils: Adelphia, Colemanstown, Collington, Dodon, Donlonton, Holmdel, Marr, Westphalia, Wist  
Physiographic Division: Atlantic Plain  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:

Local Physiographic Area: SERC  
Geomorphic Setting: on backslope of side slope of upland  
on backslope of side slope of coastal plain  
on backslope of side slope of hill  
Upslope Shape: convex  
Cross Slope Shape: convex  
Particle Size Control Section: 11 to 25 cm.  
Description origin: NASIS  
Diagnostic Features: ochric epipedon 0 to 11 cm.  
argillic horizon 11 to 25 cm.  
redox concentrations 48 to 100 cm.  

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: AsC -- Annapolis fine sandy loam, 5 to 10 percent slopes  
Pit Location: Plot ID SERC_025 Distance: 11.7 meters Compass Bearing: 130 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled  
Quad Name: South River, Maryland  
Std Latitude: 38.8861917  
Std Longitude: -76.5516667  

Latitude: 38 degrees 53 minutes 10.29 seconds north  
Longitude: 76 degrees 33 minutes 6.00 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 365415 meters  
UTM Northing: 4305295 meters  

Primary Earth Cover: Tree cover  
Secondary Earth Cover: Hardwoods  
Existing Vegetation:  
Parent Material: loamy glauconitic fluviomarine deposits  
Bedrock Kind:  
Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
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Ap—0 to 11 centimeters (0.0 to 4.3 inches); very dark grayish brown (10YR 3/2) loam, brown (10YR 5/3), dry; 14 percent clay; strong fine granular, and strong medium granular structure; friable, nonsticky, nonplastic; very fine roots throughout and medium roots throughout and fine roots throughout; many medium tubular and many fine tubular pores; 10 percent clay films on vertical faces of peds; slightly acid, pH 6.2, pH indicator solutions; clear smooth boundary. Lab sample # 16N03620

Bt—11 to 25 centimeters (4.3 to 9.8 inches); dark grayish brown (10YR 4/2) clay loam; 30 percent clay; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; medium roots throughout and fine roots throughout; many fine tubular and common coarse tubular pores; 20 percent clay films on all faces of peds; 25 percent glauconite pellets throughout; moderately acid, pH 5.6, pH indicator solutions; clear smooth boundary. Lab sample # 16N03621

BCt—25 to 48 centimeters (9.8 to 18.9 inches); olive brown (2.5Y 4/3) fine sandy loam; weak very coarse prismatic parts to weak coarse single grain; friable, nonsticky, nonplastic; fine roots throughout and coarse roots throughout; common coarse tubular pores; 10 percent clay films on vertical faces of peds; 60 percent glauconite pellets throughout; strongly acid, pH 5.5, pH indicator solutions; clear smooth boundary. Lab sample # 16N03622

BCj—48 to 73 centimeters (18.9 to 28.7 inches); 50 percent very dark grayish brown (2.5Y 3/2) and 30 percent olive brown (2.5Y 4/3) and 20 percent brown (7.5YR 4/4) fine sandy loam; structureless massive parts to single grain; friable, nonsticky, nonplastic; fine roots throughout; 7 percent prominent irregular jarosite masses Throughout; 60 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03623

Cj—73 to 100 centimeters (28.7 to 39.4 inches); 75 percent very dark gray (2.5Y 3/1) and 15 percent olive brown (2.5Y 4/3) and 10 percent brown (7.5YR 4/4) fine sandy loam; structureless massive parts to single grain; friable, nonsticky, nonplastic; fine roots throughout; 30 percent prominent irregular jarosite masses Throughout; 70 percent glauconite pellets throughout; strongly acid, pH 5.2, pH indicator solutions. Lab sample # 16N03624
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 6 2016  
Describer: Greg Taylor  
NEON Plot ID: SERC_026  
Site ID: S2016MD003026  

Pedon ID: S2016MD003026  

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: SsA -- Shrewsbury loam, 0 to 2 percent slopes  

Pit Location: Plot ID SERC_026 Distance: 4.9 meters Compass Bearing: 110 degrees Reference Point: from the 20x20 NE marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled  

Quad Name: South River, Maryland  
Std Latitude: 38.9012833  
Std Longitude: -76.5504139  

Latitude: 38 degrees 54 minutes 4.62 seconds north  
Longitude: 76 degrees 33 minutes 1.49 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 364230 meters  
UTM Northing: 4267789 meters  

Primary Earth Cover: Tree cover  
Secondary Earth Cover: Intermixed conifers and hardwoods  
Existing Vegetation:  
Parent Material: loamy fluviomarine deposits  
Bedrock Kind:  

Bedrock Depth:  

Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL  

Site Note:  

Pedon Note:  
Lab Source ID: KSSL  
Lab Pedon #: 16N0815  
Soil Name as Described/Sampled: Donlonton  
Classification: Fine-loamy, glauconitic, mesic Oxyaquic Hapludults  

Soil Name as Correlated:  
Classification:  
Pedon Type: taxadjunct to the series  
Pedon Purpose: research site  
Taxon Kind: taxadjunct  
Associated Soils: Adelphia, Annapolis, Colemantown, Collington, Dodon, Holmdel, Marr, Shrewsbury, Westphalia, Wist  
Physiographic Division: Appalachian Highlands  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:  
Local Physiographic Area: SERC  
Geomorphic Setting: on backslope of side slope of coastal plain  
on backslope of side slope of upland  
on backslope of side slope of hill  
on backslope of side slope of interfluve  
Upslope Shape: linear  
Cross Slope Shape: linear  
Particle Size Control Section: 19 to 69 cm.  
Description origin: NASIS  
Diagostic Features: ochric epipedon 0 to 19 cm.  
argillic horizon 19 to 94 cm.  
aquic conditions 54 to 100 cm.  
redox concentrations 54 to 100 cm.
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A -- 0 to 8 centimeters (0.0 to 3.1 inches); brown (10YR 4/3) loam; 17 percent clay; moderate fine granular structure; very friable, nonsticky, nonplastic; medium roots throughout and fine roots throughout and coarse roots throughout; moderately acid, pH 5.8, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03625

BA -- 8 to 19 centimeters (3.1 to 7.5 inches); brown (10YR 4/3) loam; 24 percent clay; weak medium subangular blocky, and moderate medium subangular blocky structure; very friable, slightly sticky, slightly plastic; fine roots throughout and fine roots throughout; very fine vesicular pores; 10 percent faint 10YR 4/3, moist, clay films on all faces of peds; 3 percent glauconite pellets throughout; moderately acid, pH 5.6, pH indicator solutions; clear smooth boundary. Lab sample # 16N03626

Bt1 -- 19 to 54 centimeters (7.5 to 21.3 inches); dark yellowish brown (10YR 4/4) clay loam; 36 percent clay; moderate medium subangular blocky, and moderate medium angular blocky structure; firm, moderately sticky, moderately plastic; fine roots throughout; very fine vesicular pores; 65 percent faint 10YR 4/4, moist, clay films on all faces of peds; 5 percent glauconite pellets throughout; 1 percent nonflat rounded strongly cemented 2 to 75-millimeter Quartzite fragments; moderately acid, pH 5.8, pH indicator solutions; clear wavy boundary. Lab sample # 16N03627

Bt2 -- 54 to 94 centimeters (21.3 to 37.0 inches); olive brown (2.5Y 4/4) clay loam; 31 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; fine roots throughout; very fine vesicular pores; 50 percent faint 2.5Y 4/4, moist, clay films on all faces of peds; 10 percent coarse irregular 5YR 4/6, moist, masses of oxidized iron Throughout and 25 percent coarse irregular 2.5Y 6/3, moist, iron depletions Throughout; 20 percent glauconite pellets throughout; moderately acid, pH 5.6, pH indicator solutions; clear wavy boundary. Lab sample # 16N03628

BCt -- 94 to 100 centimeters (37.0 to 39.4 inches); light yellowish brown (2.5Y 6/3) loam; 26 percent clay; moderate medium platy parts to moderate fine angular blocky structure; friable, slightly sticky, slightly plastic; fine roots throughout; very fine vesicular pores; 20 percent faint 2.5Y 4/4, moist, clay films on all faces of peds; 10 percent medium irregular 5YR 4/4, moist, masses of oxidized iron Throughout and 21 percent medium irregular 10YR 5/6, moist, masses of oxidized iron Throughout; 23 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 16N03629
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017  
Description Date: Apr 19 2016  
Describer: Chris Seitz  
NEON Plot ID: SERC_027  
Site ID: S2016MD003027

Pedon ID: S2016MD003027

Site Note:

Pedon Note:
Lab Source ID: KSSL  
Lab Pedon #: 16N0816  
Soil Name as Described/Sampled: Annapolis  
Classification: Fine-loamy, glauconitic, mesic Typic Hapludults

Soil Name as Correlated:
Classification:  
Pedon Type: correlates to named soil  
Pedon Purpose: research site  
Taxon Kind: series  
Associated Soils: Adelphia, Colemantown, Collington, Donlonton, Holmdel, Shrewsbury, Wist  
Physiographic Division: Atlantic Plain  
Physiographic Province: Coastal Plain  
Physiographic Section: Embayed section  
State Physiographic Area:
Local Physiographic Area: SERC  
Geomorphic Setting: on tread of fluviomarine terrace on tread of coastal plain  
Upslope Shape: convex  
Cross Slope Shape: linear  
Particle Size Control Section: 23 to 73 cm.  
Description origin: NASIS  
Diagnostic Features: ochric epipedon 0 to 23 cm. argillic horizon 23 to 76 cm.

Country: United States  
State: Maryland  
County: Anne Arundel  
MLRA: 149A -- Northern Coastal Plain  
Soil Survey Area: MD003 -- Anne Arundel County, Maryland  
3-HAM -- Hammonton, New Jersey  
Map Unit: AsB -- Annapolis fine sandy loam, 2 to 5 percent slopes  
Pit Location: Plot ID SERC_027 Distance: 9.5 meters Compass Bearing: 43 degrees Reference Point: from the 40x40 SW marker Measurement Location: to the pit face that was sampled  
Remarks: flagged with yellow orange or pink pin flag or stick with flagging marking pit face sampled  
Quad Name: Deale, Maryland  
Std Latitude: 38.8735556  
Std Longitude: -76.5438333  
Latitude: 38 degrees 52 minutes 24.80 seconds north  
Longitude: 76 degrees 32 minutes 37.80 seconds west  
Datum: WGS84  
UTM Zone: 18  
UTM Easting: 366294 meters  
UTM Northing: 4304130 meters  
Primary Earth Cover: Crop cover  
Secondary Earth Cover: Row crop  
Existing Vegetation:  
Parent Material: glauconitic fine-loamy fluviomarine deposits  
Bedrock Kind:  
Bedrock Depth:  
Bedrock Hardness:  
Bedrock Fracture Interval:  
Surface Fragments:  
Description database: KSSL
Ap--0 to 23 centimeters (0.0 to 9.1 inches); very dark grayish brown (2.5Y 3/2) sandy loam, light olive brown (2.5Y 5/3), dry; 6 percent clay; weak coarse subangular blocky structure; friable, nonsticky, nonplastic; very fine roots throughout; moderately acid, pH 6.0, pH indicator solutions; abrupt smooth boundary. Lab sample # 16N03630

Bt1--23 to 49 centimeters (9.1 to 19.3 inches); brown (10YR 4/3) sandy clay loam; 30 percent clay; weak medium subangular blocky structure; friable, slightly sticky, moderately plastic; common very fine roots throughout; 2.5Y 4/3), moist, clay films; 5 percent glauconite pellets throughout; neutral, pH 6.6, pH indicator solutions; clear wavy boundary. Lab sample # 16N03631

Bt2--49 to 76 centimeters (19.3 to 29.9 inches); brown (10YR 4/3) sandy clay loam; 25 percent clay; 10 percent medium prominent irregular (2.5Y 5/2) mottles; weak medium prismatic parts to moderate fine subangular blocky structure; friable, nonsticky, nonplastic; common very fine roots throughout; 2.5YR 3/3), moist, clay films; 40 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03632

CB--76 to 100 centimeters (29.9 to 39.4 inches); very dark gray (10YR 3/1) sandy loam; 15 percent clay; 10 percent medium distinct irregular (2.5YR 5/3) and 40 percent medium distinct irregular (10YR 4/3) mottles; weak coarse prismatic parts to weak thick platy structure; friable, nonsticky, nonplastic; common very fine roots throughout; 55 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 16N03633

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PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 18 2016
Describer: Ben Marshall, Dave Verdone, Phil King, Dean Shields, Chris Seitz and Rob Tunstead
NEON Plot ID: SERC_028
Site ID: S2016MD003028

Pedon ID: S2016MD003028

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 
Soil Name as Described/Sampled: Sharptown
Classification: Fine-silty, mixed, active, mesic Aquic Hapludults
Soil Name as Correlated:
Classification:
Pedon Type: correlates to named soil
Pedon Purpose: ecological site data
Taxon Kind: series
Associated Soils: Adelphia, Cumberstone, Mattapex
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:
Local Physiographic Area: SERC
Geomorphic Setting: on summit of tread of fluviomarine terrace on summit of tread of coastal plain
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 28 to 78 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 28 cm.
argillic horizon 28 to 100 cm.
redox depletions with chroma 2 or less 44 to 63 cm.
aquic conditions 44 to 100 cm.
reduced matrix 63 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: CxA -- Cumberstone-Mattapex complex, 0 to 2 percent slopes
Pit Location: Plot ID SERC_028 No plot marker found Distance: meters Compass Bearing: degrees
Reference Point: from the marker Measurement Location: to the pit face that was sampled
Remarks: Field recently plowed could not locate any corner marker; flagged with yellow orange or pink pin flag marking pit face sampled; GPS point taken 38.8718734 Latitude; -76.5221286 Longitude
Quad Name: Deale, Maryland
Std Latitude: 38.8718620
Std Longitude: -76.5221340

Latitude: 38 degrees 52 minutes 18.70 seconds north
Longitude: 76 degrees 31 minutes 19.67 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 367955 meters
UTM Northing: 4303659 meters

Primary Earth Cover: Crop cover
Secondary Earth Cover: Row crop
Existing Vegetation:
Parent Material: fine-silty fluviomarine deposits
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: MLRA03_Raleigh
Ap--0 to 28 centimeters (0.0 to 11.0 inches); dark brown (10YR 3/3) interior silt loam, pale brown (10YR 6/3) interior, dry; 15 percent clay; weak medium subangular blocky parts to strong fine subangular blocky structure; friable, nonsticky, nonplastic; very fine roots throughout and fine roots throughout; neutral, pH 6.8, pH indicator solutions; abrupt wavy boundary.

Bt1--28 to 44 centimeters (11.0 to 17.3 inches); yellowish brown (10YR 5/4) interior silt loam; 24 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; very fine roots throughout; very fine low-continuity vesicular pores; 20 percent faint 10YR 5/4), moist, clay films on all faces of peds; 15 percent medium prominent irregular 10YR 5/8), moist, iron-manganese masses with clear boundaries Throughout; neutral, pH 6.6, pH indicator solutions; very fine low-continuity vesicular pores.

Bt2--44 to 63 centimeters (17.3 to 24.8 inches); light olive brown (2.5Y 5/4) interior silty clay loam; 30 percent clay; weak coarse prismatic parts to moderate medium subangular blocky structure; friable, slightly sticky, moderately plastic; very fine roots throughout; very fine low-continuity vesicular pores; 30 percent faint 10YR 5/4), moist, clay films on all faces of peds; 10 percent medium distinct irregular 2.5Y 6/2), moist, iron depletions with clear boundaries Throughout and 20 percent medium distinct irregular 10YR 5/6), moist, iron-manganese masses with clear boundaries Throughout; neutral, pH 6.6, pH indicator solutions; gradual wavy boundary.

Btg--63 to 100 centimeters (24.8 to 39.4 inches); gray (5Y 6/1) interior silt loam; 20 percent clay; weak coarse prismatic, and weak coarse platy structure; friable, slightly sticky, slightly plastic; very fine roots throughout; very fine low-continuity vesicular pores; 15 percent faint 2.5Y 5/2), moist, clay films on all faces of peds; 20 percent medium prominent irregular 7.5YR 5/6), moist, iron-manganese masses with sharp boundaries Throughout; strongly acid, pH 5.1, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 18 2016
Describer: Ben Marshall
NEON Plot ID: SERC_029
Site ID: S2016MD003029

Pedon ID: S2016MD003029

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 16N0818
Soil Name as Described/Sampled: Donlonton
Classification: Fine-loamy, glauconitic, mesic Aquic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: research site
Taxon Kind: series
Associated Soils: Adelphia, Cumberstone, Mattapex
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:

Local Physiographic Area: SERC
Geomorphic Setting: on footslope of tread of fluviomarine terrace on footslope of tread of coastal plain
Upslope Shape: concave
Cross Slope Shape: concave
Particle Size Control Section: 36 to 75 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 36 cm.
argillic horizon 36 to 75 cm.
aquic conditions 36 to 100 cm.
redox concentrations 36 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: AdB -- Adelphia-Holmdel complex, 2 to 5 percent slopes
Pit Location: Plot ID SERC_029 Distance: 16.0 meters Compass Bearing: 30 degrees Reference Point: from the 40x40 SW marker Measurement Location: to the pit face that was sampled Remarks: In a recently plowed field flagged with yellow or orange or pink pin flag marking pit face sampled
Quad Name: Deale, Maryland
Std Latitude: 38.8711400
Std Longitude: -76.5291563

Latitude: 38 degrees 52 minutes 16.10 seconds north
Longitude: 76 degrees 31 minutes 44.96 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 367344 meters
UTM Northing: 4303588 meters

Primary Earth Cover: Crop cover
Secondary Earth Cover: Row crop
Existing Vegetation:
Parent Material: loamy glauconitic fluviomarine deposits
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: KSSL
Ap--0 to 36 centimeters (0.0 to 14.2 inches); brown (10YR 4/3) sandy loam, light brownish gray (10YR 6/2), dry; 12 percent clay; weak medium subangular blocky structure; very friable, slightly sticky, nonplastic; very fine roots throughout; moderately acid, pH 6.0, pH indicator solutions; clear smooth boundary. Lab sample # 16N03638

Bt1--36 to 56 centimeters (14.2 to 22.0 inches); olive brown (2.5Y 4/3) sandy clay loam; 22 percent clay; moderate coarse subangular blocky structure; friable, slightly sticky, slightly plastic; very fine roots throughout; 30 percent 5Y 4/3), moist, clay films on all faces of peds; 30 percent fine irregular 5Y 4/4), moist, masses of oxidized iron Throughout; 10 percent glauconite pellets throughout; moderately acid, pH 5.8, pH indicator solutions; clear smooth boundary. Lab sample # 16N03639

Bt2--56 to 75 centimeters (22.0 to 29.5 inches); olive (5Y 4/3) sandy clay loam; 20 percent clay; moderate coarse subangular blocky structure; friable, slightly sticky, slightly plastic; very fine roots throughout; 25 percent 5Y 4/3), moist, clay films on all faces of peds; 20 percent irregular 5YR 4/4), moist, masses of oxidized iron Throughout; 50 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions; clear wavy boundary. Lab sample # 16N03640. A thin layer of plinthite occupies about 25 percent at the bottom of this horizon.

BCt--75 to 100 centimeters (29.5 to 39.4 inches); dark grayish olive (10Y 4/2) sandy loam; 18 percent clay; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; very fine roots throughout; 10 percent 7.5YR 4/3), moist, clay bridges between sand grains; 40 percent irregular 7.5YR 4/6), moist, masses of oxidized iron Throughout; 75 percent glauconite pellets throughout; strongly acid, pH 5.4, pH indicator solutions. Lab sample # 16N03641
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 8 2016
Describer: Chad Ferguson, Greg Taylor and Rob Tunstead
NEON Plot ID: SERC_030
Site ID: S2016MD003030

Pedon ID: S2016MD003030

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #:
Soil Name as Described/Sampled: Hurlock
Classification: Coarse-loamy, siliceous, semiactive, mesic Typic Endoaquults
Soil Name as Correlated:
Classification:
Pedon Type: taxadjunct to the series
Pedon Purpose: ecological site data
Taxon Kind: taxadjunct
Associated Soils:
Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area:
Local Physiographic Area: SERC
Geomorphological Setting: on footslope of base slope of coastal plain
on footslope of base slope of interfluve
Upslope Shape: linear
Cross Slope Shape: concave
Particle Size Control Section: 28 to 76 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 28 cm.
aquic conditions 17 to 100 cm.
redox concentrations 17 to 100 cm.
argillic horizon 28 to 76 cm.
reduced matrix 28 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: DnB -- Donlonton fine sandy loam, 2 to 5 percent slopes
Pit Location: Plot ID SERC_030 Distance: 8.2 meters Compass Bearing: 80 degrees Reference Point: from the 40x40 SW marker Measurement Location: to the pit face that was sampled
Remarks: flagged with yellow or orange or pink pin flag or stick with flagging marking pit face sampled
Sampled soil pit location was 8 meters from the southwest outer 40 meter flag that was pre-located by NEON personnel. Azimuth from the outer 40 meter flag to the soil pit was 80 degrees.
Quad Name: South River, Maryland
Std Latitude: 38.9098639
Std Longitude: -76.5491139
Latitude: 38 degrees 54 minutes 35.51 seconds north
Longitude: 76 degrees 32 minutes 56.81 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365686 meters
UTM Northing: 4307914 meters
Primary Earth Cover: Crop cover
Secondary Earth Cover: Row crop
Existing Vegetation:
Parent Material: coarse-loamy fluviomarine deposits
Bedrock Kind:
Bedrock Depth:
Bedrock Hardness:
Bedrock Fracture Interval:
Surface Fragments:
Description database: MLRA03_Raleigh
### Site ID: S2016MD003030

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Ap1--0 to 17 centimeters (0.0 to 6.7 inches); brown (10YR 4/3) interior fine sandy loam, brown (10YR 5/3) interior, dry; moderate fine granular, and moderate medium granular structure; friable, nonsticky, nonplastic; very fine roots throughout and fine roots throughout; 1 percent nonflat subangular indurated 2 to 5-millimeter Quartzite fragments; slightly acid, pH 6.2, pH indicator solutions; clear smooth boundary.

Ap2--17 to 28 centimeters (6.7 to 11.0 inches); grayish brown (10YR 5/2) interior fine sandy loam, pale brown (10YR 6/3) interior, dry; moderate medium granular, and moderate coarse granular structure; friable, nonsticky, nonplastic; fine roots throughout; fine low-continuity dendritic tubular pores; 20 percent fine faint irregular 7.5YR 4/4), moist, iron-manganese masses with clear boundaries Throughout; moderately acid, pH 5.8, pH indicator solutions; clear smooth boundary.

Btg1--28 to 45 centimeters (11.0 to 17.7 inches); grayish brown (2.5Y 5/2) interior loam; 17 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; very fine roots throughout and fine roots throughout; very fine low-continuity dendritic tubular and fine low-continuity dendritic tubular pores; 7 percent faint 2.5Y 5/2), moist, clay films on all faces of peds; 10 percent fine prominent irregular 7.5YR 5/6), moist, iron-manganese masses with clear boundaries Throughout; moderately acid, pH 5.6, pH indicator solutions; gradual wavy boundary.

Btg2--45 to 76 centimeters (17.7 to 29.9 inches); light brownish gray (2.5Y 6/2) interior loam; 16 percent clay; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; very fine roots throughout and fine roots throughout; fine low-continuity vesicular pores; 25 percent faint 2.5Y 6/2), moist, clay films on all faces of peds; 8 percent fine prominent irregular 7.5YR 5/6), moist, iron-manganese masses with clear boundaries Throughout; strongly acid, pH 5.4, pH indicator solutions; gradual wavy boundary.

BCg--76 to 100 centimeters (29.9 to 39.4 inches); gray (2.5Y 6/1) interior fine sandy loam; 10 percent clay; weak medium subangular blocky structure; friable, nonsticky, nonplastic; 5 percent fine prominent irregular 7.5YR 6/4), moist, iron-manganese masses with clear boundaries Throughout; strongly acid, pH 5.2, pH indicator solutions.
PEDON DESCRIPTION -- NEON Site SERC

Print Date: Nov 5 2017
Description Date: Apr 5 2016
Describer: P. King, D. Shields, M. Van Lear, B. Marshall
NEON Plot ID: SERC_068
Site ID: S2016MD003068

Pedon ID: S2016MD003068

Site Note:

Pedon Note:
Lab Source ID: KSSL
Lab Pedon #: 
Soil Name as Described/Sampled: Marr
Classification: Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Soil Name as Correlated:

Classification:
Pedon Type: correlates to named soil
Pedon Purpose: ecological site data
Taxon Kind: series
Associated Soils: Adelphia, Annapolis, Colemantown, Collington, Dodon, Donlonton, Holmdel, Westphalia, Wist

Physiographic Division: Atlantic Plain
Physiographic Province: Coastal Plain
Physiographic Section: Embayed section
State Physiographic Area: 
Local Physiographic Area: SERC
Geomorphic Setting: on summit of nose slope of coastal plain
on summit of nose slope of upland
on summit of nose slope of interfluve
Upslope Shape: linear
Cross Slope Shape: linear
Particle Size Control Section: 40 to 90 cm.
Description origin: NASIS
Diagnostic Features: ochric epipedon 0 to 40 cm.
argillic horizon 40 to 100 cm.

Country: United States
State: Maryland
County: Anne Arundel
MLRA: 149A -- Northern Coastal Plain
Soil Survey Area: MD003 -- Anne Arundel County, Maryland
3-HAM -- Hammonton, New Jersey
Map Unit: MaC -- Marr-Dodon complex, 5 to 10 percent slopes

Pit Location: Plot ID SERC_068 Distance: 9.2 meters Compass Bearing: 242 degrees Reference Point: from the 20x20 SW marker Measurement Location: to the pit face that was sampled
Remarks: flagged with yellow; orange or pink pin flag or stick with flagging marking pit face sampled

Quad Name: South River, Maryland
Std Latitude: 38.8799722
Std Longitude: -76.5567778

Latitude: 38 degrees 52 minutes 47.90 seconds north
Longitude: 76 degrees 33 minutes 24.40 seconds west
Datum: WGS84
UTM Zone: 18
UTM Easting: 365420 meters
UTM Northing: 4305292 meters

Primary Earth Cover: Tree cover
Secondary Earth Cover: Hardwoods
Existing Vegetation:
Parent Material: sandy fluviomarine deposits
Bedrock Kind: 
Bedrock Depth: 
Bedrock Hardness: 
Bedrock Fracture Interval: 
Surface Fragments: 
Description database: MLRA03_Raleigh
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Ap--0 to 25 centimeters (0.0 to 9.8 inches); brown (10YR 4/3) fine sandy loam; 16 percent clay; moderate medium subangular blocky structure; friable, nonsticky, nonplastic; medium roots throughout and fine roots throughout; clear smooth boundary.

BE--25 to 40 centimeters (9.8 to 15.7 inches); yellowish brown (10YR 5/4) fine sandy loam; 16 percent clay; weak medium subangular blocky, and weak coarse subangular blocky structure; friable, nonsticky, slightly plastic; medium roots throughout; abrupt smooth boundary.

Bt1--40 to 64 centimeters (15.7 to 25.2 inches); dark yellowish brown (10YR 4/4) sandy clay loam; 27 percent clay; strong medium subangular blocky structure; friable, moderately sticky, moderately plastic; medium roots throughout; 20 percent prominent 10YR 4/4), moist, clay films; 10 percent glauconite pellets throughout; clear wavy boundary.

Bt2--64 to 100 centimeters (25.2 to 39.4 inches); strong brown (7.5YR 5/6) sandy clay loam; 24 percent clay; friable, moderately sticky, moderately plastic; medium roots throughout; 15 percent distinct 7.5YR 4/4), moist, clay films; 19 percent glauconite pellets throughout.