



United States
Department of
Agriculture

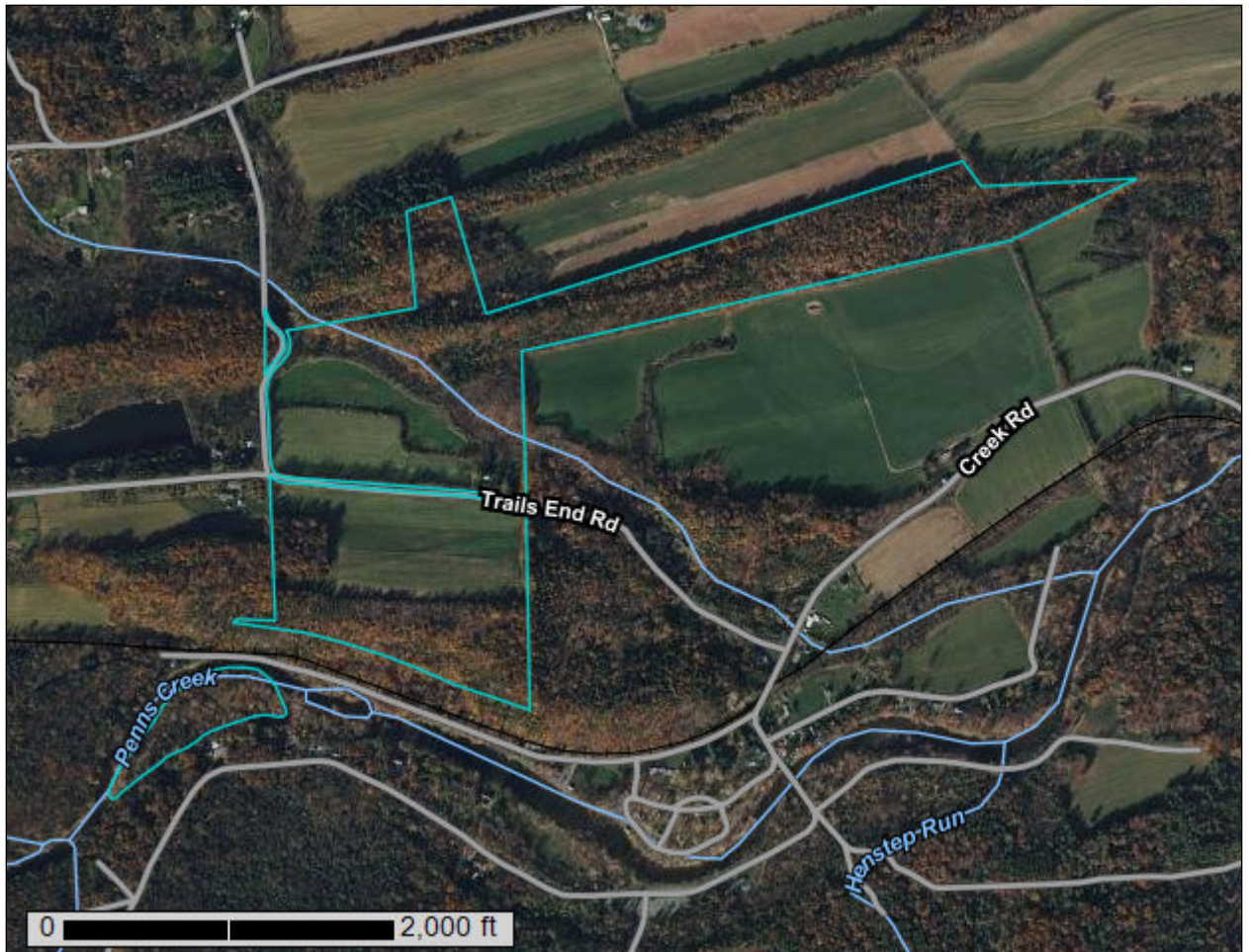
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Union County, Pennsylvania

D'Angelo Farm



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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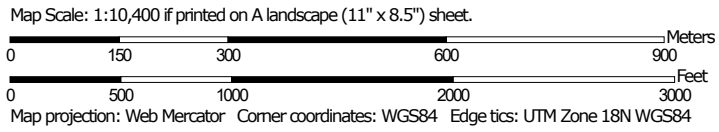
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole


 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Union County, Pennsylvania
 Survey Area Data: Version 17, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 6, 2020—Nov 7, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	1.4	1.2%
Bd	Basher soils, frequently flooded	0.4	0.4%
BkB	Berks channery silt loam, 3 to 8 percent slopes	11.3	9.6%
BkC	Berks channery silt loam, 8 to 15 percent slopes	0.9	0.8%
BxB	Buchanan channery loam, 0 to 8 percent slopes, extremely stony	0.4	0.4%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	7.8	6.6%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	4.2	3.6%
HtC	Hartleton channery silt loam, 8 to 15 percent slopes	5.6	4.8%
HtD	Hartleton channery silt loam, 15 to 25 percent slopes	5.9	5.1%
Hv	Holly silt loam	10.4	8.9%
Hz	Holly silt loam, rarely flooded	0.3	0.2%
LnC	Leck kill shaly silt loam, 8 to 15 percent slopes	5.4	4.6%
MkC	Meckesville silt loam, 8 to 15 percent slopes	9.5	8.1%
Ug	Udifluvents and Fluvaquents, gravelly	5.5	4.7%
W	Water	0.3	0.2%
WkE	Weikert and Klinesville shaly silt loams, steep	47.7	40.7%
Totals for Area of Interest		117.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the

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characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered

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practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Union County, Pennsylvania

AbB—Albrights silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 14tj
Elevation: 500 to 2,800 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 40 to 60 degrees F
Frost-free period: 130 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Albrights and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albrights

Setting

Landform: Ridges
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope
Down-slope shape: Convex
Across-slope shape: Concave
Parent material: Fine-loamy colluvium derived from sedimentary rock

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 30 inches: clay loam
H3 - 30 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 32 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 12 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F147XY002PA - Mixed Sedimentary Upland
Hydric soil rating: No

Minor Components

Leck kill

Percent of map unit: 5 percent
Hydric soil rating: No

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Shelmadine

Percent of map unit: 5 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Meckesville

Percent of map unit: 5 percent
Landform: Mountain valleys
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Alvira

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Bd—Basher soils, frequently flooded

Map Unit Setting

National map unit symbol: l4tw
Elevation: 400 to 840 feet
Mean annual precipitation: 30 to 45 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 120 to 187 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Basher and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Basher

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

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Parent material: Reddish alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 5 inches: silt loam
H2 - 5 to 24 inches: silt loam
H3 - 24 to 56 inches: loam
H4 - 56 to 65 inches: very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 72 to 99 inches to lithic bedrock
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Ecological site: F147XY009PA - Loamy Mixed Floodplain
Hydric soil rating: No

Minor Components

Barbour

Percent of map unit: 10 percent
Hydric soil rating: No

Holly

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

BkB—Berks channery silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2sgb5
Elevation: 320 to 3,570 feet
Mean annual precipitation: 37 to 50 inches
Mean annual air temperature: 47 to 56 degrees F
Frost-free period: 148 to 192 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Berks and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berks

Setting

Landform: Mountain slopes, ridges

Landform position (two-dimensional): Backslope, summit, shoulder

Landform position (three-dimensional): Upper third of mountainflank, side slope

Down-slope shape: Convex

Across-slope shape: Convex, linear

Parent material: Residuum weathered from shale and siltstone and/or fine grained sandstone

Typical profile

Ap - 0 to 7 inches: channery silt loam

Bw1 - 7 to 15 inches: channery silt loam

Bw2 - 15 to 28 inches: very channery silt loam

C - 28 to 36 inches: extremely channery silt loam

R - 36 to 46 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Other vegetative classification: Dry Uplands (DU2)

Hydric soil rating: No

Minor Components

Weikert

Percent of map unit: 10 percent

Landform: Ridges

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

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Other vegetative classification: Droughty Shales (SD2)
Hydric soil rating: No

Brinkerton

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

BkC—Berks channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2sgcg
Elevation: 320 to 3,570 feet
Mean annual precipitation: 37 to 50 inches
Mean annual air temperature: 47 to 56 degrees F
Frost-free period: 148 to 192 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Berks and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berks

Setting

Landform: Mountain slopes, ridges
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Upper third of mountainflank, side slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Parent material: Residuum weathered from shale and siltstone and/or fine grained sandstone

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bw1 - 8 to 14 inches: very channery silt loam
Bw2 - 14 to 26 inches: very channery silt loam
C - 26 to 36 inches: extremely channery silt loam
R - 36 to 46 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium

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Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Other vegetative classification: Dry Uplands (DU3), Dry Uplands (DU2)

Hydric soil rating: No

Minor Components

Weikert

Percent of map unit: 10 percent

Landform: Ridges

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Other vegetative classification: Droughty Shales (SD2)

Hydric soil rating: No

Brinkerton

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: Yes

BxB—Buchanan channery loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2z1my

Elevation: 480 to 1,730 feet

Mean annual precipitation: 37 to 50 inches

Mean annual air temperature: 50 to 55 degrees F

Frost-free period: 120 to 177 days

Farmland classification: Not prime farmland

Map Unit Composition

Buchanan and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buchanan

Setting

Landform: Hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

O_i - 0 to 2 inches: slightly decomposed plant material

O_e - 2 to 2 inches: moderately decomposed plant material

A - 2 to 4 inches: channery loam

BE - 4 to 12 inches: channery loam

Bt₁ - 12 to 20 inches: channery loam

Bt₂ - 20 to 29 inches: channery loam

Btx₁ - 29 to 35 inches: channery loam

Btx₂ - 35 to 50 inches: channery loam

C - 50 to 71 inches: very channery loam

R - 71 to 81 inches: bedrock

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 7.0 percent

Depth to restrictive feature: 24 to 30 inches to fragipan; 60 to 79 inches to lithic bedrock

Drainage class: Moderately well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (K_{sat}): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 15 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C/D

Ecological site: F147XY002PA - Mixed Sedimentary Upland

Hydric soil rating: No

Minor Components

Murrill

Percent of map unit: 5 percent

Landform: Hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave, linear

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Across-slope shape: Concave, linear
Hydric soil rating: No

Laidig

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Andover

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Alvira

Percent of map unit: 1 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Shelmadine

Percent of map unit: 1 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

CaC—Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: I4v6
Elevation: 300 to 1,600 feet
Mean annual precipitation: 36 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 120 to 217 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Calvin and similar soils: 50 percent

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Klinesville and similar soils: 30 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Calvin

Setting

Landform: Hillslopes

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from siltstone

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 25 inches: very channery silt loam

H3 - 25 to 30 inches: very channery silt loam

R - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Hydric soil rating: No

Description of Klinesville

Setting

Landform: Valleys, ridges

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from siltstone

Typical profile

H1 - 0 to 7 inches: channery silt loam

H2 - 7 to 11 inches: very channery silt loam

H3 - 11 to 15 inches: very channery silt loam

R - 15 to 19 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Custom Soil Resource Report

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Hydric soil rating: No

Minor Components

Leck kill

Percent of map unit: 10 percent

Hydric soil rating: No

Berks

Percent of map unit: 5 percent

Hydric soil rating: No

Weikert

Percent of map unit: 5 percent

Hydric soil rating: No

HtB—Hartleton channery silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 14vv

Elevation: 300 to 1,500 feet

Mean annual precipitation: 35 to 50 inches

Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 140 to 217 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Hartleton and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hartleton

Setting

Landform: — error in exists on —

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Custom Soil Resource Report

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 45 inches: very channery silty clay loam

H3 - 45 to 50 inches: very channery loam

R - 50 to 54 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 40 to 80 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Ecological site: F147XY002PA - Mixed Sedimentary Upland

Hydric soil rating: No

Minor Components

Berks

Percent of map unit: 5 percent

Hydric soil rating: No

Weikert

Percent of map unit: 5 percent

Hydric soil rating: No

Leck kill

Percent of map unit: 5 percent

Hydric soil rating: No

Bedington

Percent of map unit: 5 percent

Hydric soil rating: No

Allenwood

Percent of map unit: 5 percent

Hydric soil rating: No

HtC—Hartleton channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 14vw

Elevation: 300 to 1,600 feet

Mean annual precipitation: 35 to 50 inches

Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 120 to 217 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hartleton and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hartleton

Setting

Landform: — error in exists on —

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 8 inches: channery silt loam

H2 - 8 to 45 inches: very channery silty clay loam

H3 - 45 to 50 inches: very channery loam

R - 50 to 54 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 40 to 80 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Ecological site: F147XY002PA - Mixed Sedimentary Upland

Hydric soil rating: No

Minor Components

Berks

Percent of map unit: 5 percent
Hydric soil rating: No

Leck kill

Percent of map unit: 5 percent
Hydric soil rating: No

Weikert

Percent of map unit: 5 percent
Hydric soil rating: No

Allenwood

Percent of map unit: 5 percent
Hydric soil rating: No

Bedington

Percent of map unit: 5 percent
Hydric soil rating: No

HtD—Hartleton channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 14vx
Elevation: 300 to 1,600 feet
Mean annual precipitation: 35 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 120 to 217 days
Farmland classification: Not prime farmland

Map Unit Composition

Hartleton and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hartleton

Setting

Landform: — error in exists on —
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Residuum weathered from sandstone and shale

Typical profile

H1 - 0 to 8 inches: channery silt loam
H2 - 8 to 45 inches: very channery silty clay loam
H3 - 45 to 50 inches: very channery loam

Custom Soil Resource Report

R - 50 to 54 inches: weathered bedrock

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 40 to 80 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Medium

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: F147XY002PA - Mixed Sedimentary Upland

Hydric soil rating: No

Minor Components

Weikert

Percent of map unit: 10 percent

Hydric soil rating: No

Bedington

Percent of map unit: 5 percent

Hydric soil rating: No

Berks

Percent of map unit: 5 percent

Hydric soil rating: No

Allenwood

Percent of map unit: 5 percent

Hydric soil rating: No

Hv—Holly silt loam

Map Unit Setting

National map unit symbol: l4w1

Elevation: 400 to 1,170 feet

Mean annual precipitation: 30 to 45 inches

Mean annual air temperature: 45 to 54 degrees F

Frost-free period: 120 to 187 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Holly and similar soils: 90 percent

Minor components: 10 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holly

Setting

Landform: Depressions on flood plains, backswamps

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy alluvium derived from sandstone and shale

Typical profile

H1 - 0 to 11 inches: silt loam

H2 - 11 to 42 inches: silty clay loam

H3 - 42 to 60 inches: stratified very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D

Ecological site: F147XY011PA - Poorly Drained Fine Mixed Floodplain

Hydric soil rating: Yes

Minor Components

Basher

Percent of map unit: 5 percent

Hydric soil rating: No

Holly, ponded

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Hz—Holly silt loam, rarely flooded

Map Unit Setting

National map unit symbol: I4w3

Elevation: 300 to 1,000 feet

Custom Soil Resource Report

Mean annual precipitation: 30 to 55 inches
Mean annual air temperature: 40 to 60 degrees F
Frost-free period: 120 to 187 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Holly and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holly

Setting

Landform: Depressions on flood plains, backswamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy alluvium derived from sandstone and shale

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 42 inches: silt loam
H3 - 42 to 60 inches: stratified very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F147XY011PA - Poorly Drained Fine Mixed Floodplain
Hydric soil rating: Yes

Minor Components

Alvira

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Basher

Percent of map unit: 5 percent

Custom Soil Resource Report

Hydric soil rating: No

Monongahela

Percent of map unit: 5 percent

Hydric soil rating: No

LnC—Leck kill shaly silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: l4wc

Elevation: 500 to 2,800 feet

Mean annual precipitation: 34 to 48 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 130 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Leck kill and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leck Kill

Setting

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Reddish residuum derived from sedimentary rock

Typical profile

H1 - 0 to 10 inches: channery silt loam

H2 - 10 to 43 inches: channery silt loam

H3 - 43 to 58 inches: very channery silt loam

R - 58 to 62 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 40 to 80 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

*Ecological site: F147XY002PA - Mixed Sedimentary Upland, F127XY013WV -
Divergent Uplands*

Hydric soil rating: No

Minor Components

Meckesville

Percent of map unit: 10 percent

Landform: Mountain valleys

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

MkC—Meckesville silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: l4wh

Elevation: 400 to 2,800 feet

Mean annual precipitation: 34 to 48 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 120 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Meckesville and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Meckesville

Setting

Landform: Mountain valleys, mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

*Parent material: Sandstone, siltstone and shale colluvium derived from
sedimentary rock*

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 36 inches: silt loam

H3 - 36 to 60 inches: gravelly silty clay loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 25 to 48 inches to fragipan

Custom Soil Resource Report

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 28 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F147XY002PA - Mixed Sedimentary Upland
Hydric soil rating: No

Minor Components

Calvin

Percent of map unit: 5 percent
Hydric soil rating: No

Allenwood

Percent of map unit: 5 percent
Hydric soil rating: No

Leck kill

Percent of map unit: 5 percent
Hydric soil rating: No

Ug—Udifluvents and Fluvaquents, gravelly

Map Unit Setting

National map unit symbol: l4wx
Elevation: 200 to 1,610 feet
Mean annual precipitation: 30 to 46 inches
Mean annual air temperature: 44 to 57 degrees F
Frost-free period: 120 to 187 days
Farmland classification: Not prime farmland

Map Unit Composition

Udifluvents and similar soils: 43 percent
Fluvaquents and similar soils: 32 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udifluvents

Setting

Landform: Flood plains
Parent material: Gravelly alluvium

Custom Soil Resource Report

Typical profile

H1 - 0 to 4 inches: stratified very gravelly sandy loam
H2 - 4 to 59 inches: stratified very gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)
Depth to water table: About 24 to 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Fluvaquents

Setting

Landform: Depressions
Parent material: Gravelly alluvium

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 12 inches: gravelly loam
H2 - 12 to 59 inches: stratified very gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 6.00 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: Occasional
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Linden

Percent of map unit: 10 percent
Hydric soil rating: No

Basher

Percent of map unit: 10 percent
Hydric soil rating: No

Holly

Percent of map unit: 5 percent
Landform: Depressions on flood plains, backswamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: ktpj
Mean annual precipitation: 36 to 46 inches
Mean annual air temperature: 44 to 57 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WkE—Weikert and Klinesville shaly silt loams, steep

Map Unit Setting

National map unit symbol: l4x8
Elevation: 300 to 1,600 feet
Mean annual precipitation: 36 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 120 to 217 days
Farmland classification: Not prime farmland

Map Unit Composition

Weikert and similar soils: 40 percent
Klinesville and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weikert

Setting

Landform: Hills

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from shale and siltstone

Typical profile

H1 - 0 to 7 inches: channery silt loam

H2 - 7 to 15 inches: very channery silt loam

H3 - 15 to 19 inches: bedrock

Properties and qualities

Slope: 25 to 75 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Hydric soil rating: No

Description of Klinesville

Setting

Landform: Valleys, ridges

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from siltstone

Typical profile

H1 - 0 to 7 inches: channery silt loam

H2 - 7 to 11 inches: very channery silt loam

H3 - 11 to 15 inches: very channery silt loam

R - 15 to 19 inches: bedrock

Properties and qualities

Slope: 25 to 75 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland
Hydric soil rating: No

Minor Components

Hartleton

Percent of map unit: 10 percent
Landform: — error in exists on —
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

Berks

Percent of map unit: 10 percent
Hydric soil rating: No

Leck kill

Percent of map unit: 5 percent
Hydric soil rating: No

Rushtown

Percent of map unit: 5 percent
Hydric soil rating: No