

Soil Maps & Productivity Data

98.5± Acre Farmland Offering — Washington Township, Snyder County, PA
Red Bank Road • Parcel 1902040

This packet contains the USDA-NRCS Custom Soil Resource Report prepared for the property, including the soil map, map unit legend, land capability classification, and non-irrigated crop yield projections for alfalfa hay, corn, and wheat.

What's Included

Soil Map & Map Legend	Aerial soil map with mapped soil unit boundaries
Map Unit Legend	Each soil type, acreage, and percent of area
Nonirrigated Capability Class	USDA land capability classification map & table
Crop Yield Projections	Alfalfa hay (tons), corn (bu), and wheat (bu) by soil unit
Appendix	Detailed technical description of each soil map unit

Predominant Soils

Soil Map Unit	Acres	% of Area
Alvira silt loam, 3–8% slopes	23.4 ac	16.2%
Calvin-Klinesville shaly silt loams, 8–15% slopes	23.2 ac	16.0%
Hartleton channery silt loam, 3–8% slopes	13.2 ac	9.1%
Calvin-Klinesville shaly silt loams, 3–8% slopes	9.7 ac	6.7%
Leck Kill shaly silt loam, 3–8% slopes	7.9 ac	5.5%

Full soil unit breakdown appears in the Map Unit Legend on the following pages.

Important Note on Map Coverage

The soil survey area of interest (AOI) used in this report covers the **entire original farm**, including acreage on both sides of Red Bank Road. The offering consists of the **98.5± acre tract on the south side of Red Bank Road only**. Buyers should refer to the parcel boundary when interpreting soil coverage for the offered acreage.

Source: USDA Natural Resources Conservation Service, Web Soil Survey — Custom Soil Resource Report for Snyder County, Pennsylvania. Prepared in connection with an appraisal by Agrarian Associates Inc.

Information deemed reliable but not guaranteed. Acreage, boundaries, soils and all property information subject to buyer verification. Official updated survey pending completion.

Contact

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Don Reader • 570-541-3641

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

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: Snyder County, Pennsylvania
Survey Area Data: Version 19, Sep 4, 2025

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

Date(s) aerial images were photographed: Apr 13, 2023—May 17, 2023

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.

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	4.9	3.4%
AoB	Allenwood and Washington soils, 3 to 8 percent slopes	4.6	3.2%
ArB	Alvira silt loam, 3 to 8 percent slopes	23.4	16.2%
AsB	Alvira very stony silt loam, 0 to 8 percent slopes	1.7	1.2%
BkC	Berks channery silt loam, 8 to 15 percent slopes	0.0	0.0%
CaB	Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes	9.7	6.7%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	23.2	16.0%
CaD	Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes	0.2	0.2%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	13.2	9.1%
LnB	Leck kill shaly silt loam, 3 to 8 percent slopes	7.9	5.5%
ShB	Shelmadine silt loam, 3 to 8 percent slopes	3.5	2.4%
WbB	Watson silt loam, 3 to 8 percent slopes	12.2	8.5%
WeB	Weikert channery silt loam, 3 to 8 percent slopes	12.6	8.7%
WeC	Weikert channery silt loam, 8 to 15 percent slopes	7.4	5.1%
WeD	Weikert channery silt loam, 15 to 25 percent slopes	18.2	12.6%
WkE	Weikert and Klinesville shaly silt loams, steep	1.9	1.3%
Totals for Area of Interest		144.7	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

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Nonirrigated Capability Class (READER)

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

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Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

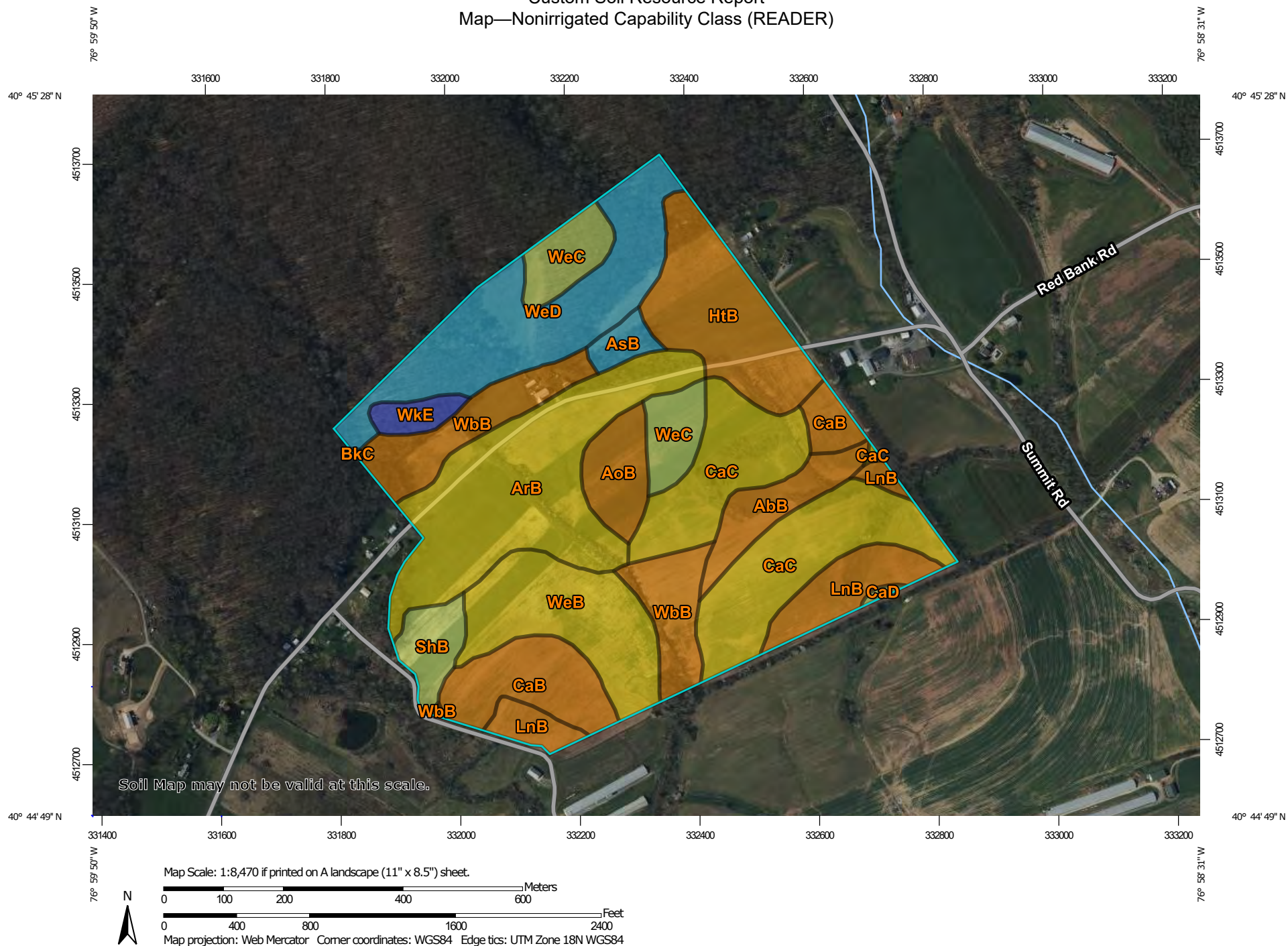
Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

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Map—Nonirrigated Capability Class (READER)



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MAP LEGEND**Area of Interest (AOI)**
 Area of Interest (AOI)
Soils**Soil Rating Polygons**

 Capability Class - 1
 Capability Class - 2
 Capability Class - 3
 Capability Class - 4
 Capability Class - 5
 Capability Class - 6
 Capability Class - 7
 Capability Class - 8
 Not rated or not available

Soil Rating Lines

 Capability Class - 1
 Capability Class - 2
 Capability Class - 3
 Capability Class - 4
 Capability Class - 5
 Capability Class - 6
 Capability Class - 7
 Capability Class - 8
 Not rated or not available

Soil Rating Points

 Capability Class - 1
 Capability Class - 2

 Capability Class - 3
 Capability Class - 4
 Capability Class - 5
 Capability Class - 6
 Capability Class - 7
 Capability Class - 8
 Not rated or not available

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.

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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.

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 Coordinate System: Web Mercator (EPSG:3857)

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Custom Soil Resource Report

Table—Nonirrigated Capability Class (READER)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	2	4.9	3.4%
AoB	Allenwood and Washington soils, 3 to 8 percent slopes	2	4.6	3.2%
ArB	Alvira silt loam, 3 to 8 percent slopes	3	23.4	16.2%
AsB	Alvira very stony silt loam, 0 to 8 percent slopes	6	1.7	1.2%
BkC	Berks channery silt loam, 8 to 15 percent slopes	3	0.0	0.0%
CaB	Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes	2	9.7	6.7%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	3	23.2	16.0%
CaD	Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes	4	0.2	0.2%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	2	13.2	9.1%
LnB	Leck kill shaly silt loam, 3 to 8 percent slopes	2	7.9	5.5%
ShB	Shelmadine silt loam, 3 to 8 percent slopes	4	3.5	2.4%
WbB	Watson silt loam, 3 to 8 percent slopes	2	12.2	8.5%
WeB	Weikert channery silt loam, 3 to 8 percent slopes	3	12.6	8.7%
WeC	Weikert channery silt loam, 8 to 15 percent slopes	4	7.4	5.1%
WeD	Weikert channery silt loam, 15 to 25 percent slopes	6	18.2	12.6%
WkE	Weikert and Klinesville shaly silt loams, steep	7	1.9	1.3%
Totals for Area of Interest			144.7	100.0%

Rating Options—Nonirrigated Capability Class (READER)*Aggregation Method: Dominant Condition*

Custom Soil Resource Report

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Vegetative Productivity

Vegetative productivity includes estimates of potential vegetative production for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture and rangeland. In the underlying database, some states maintain crop yield data by individual map unit component. Other states maintain the data at the map unit level. Attributes are included for both, although only one or the other is likely to contain data for any given geographic area. For other land uses, productivity data is shown only at the map unit component level. Examples include potential crop yields under irrigated and nonirrigated conditions, forest productivity, forest site index, and total rangeland production under of normal, favorable and unfavorable conditions.

Yields of Non-Irrigated Crops (Map Unit): Alfalfa hay (Tons) (READER)

These are the estimated average yields per acre that can be expected of selected nonirrigated crops under a high level of management. In any given year, yields may be higher or lower than those indicated because of variations in rainfall and other climatic factors.

In the database, some states maintain crop yield data by individual map unit component and others maintain the data at the map unit level. Attributes are included in this application for both, although only one or the other is likely to contain data for any given geographic area. This attribute uses data maintained at the map unit level.

The yields are actually recorded as three separate values in the database. A low value and a high value indicate the range for the soil component. A "representative" value indicates the expected value for the component. For these yields, only the representative value is used.

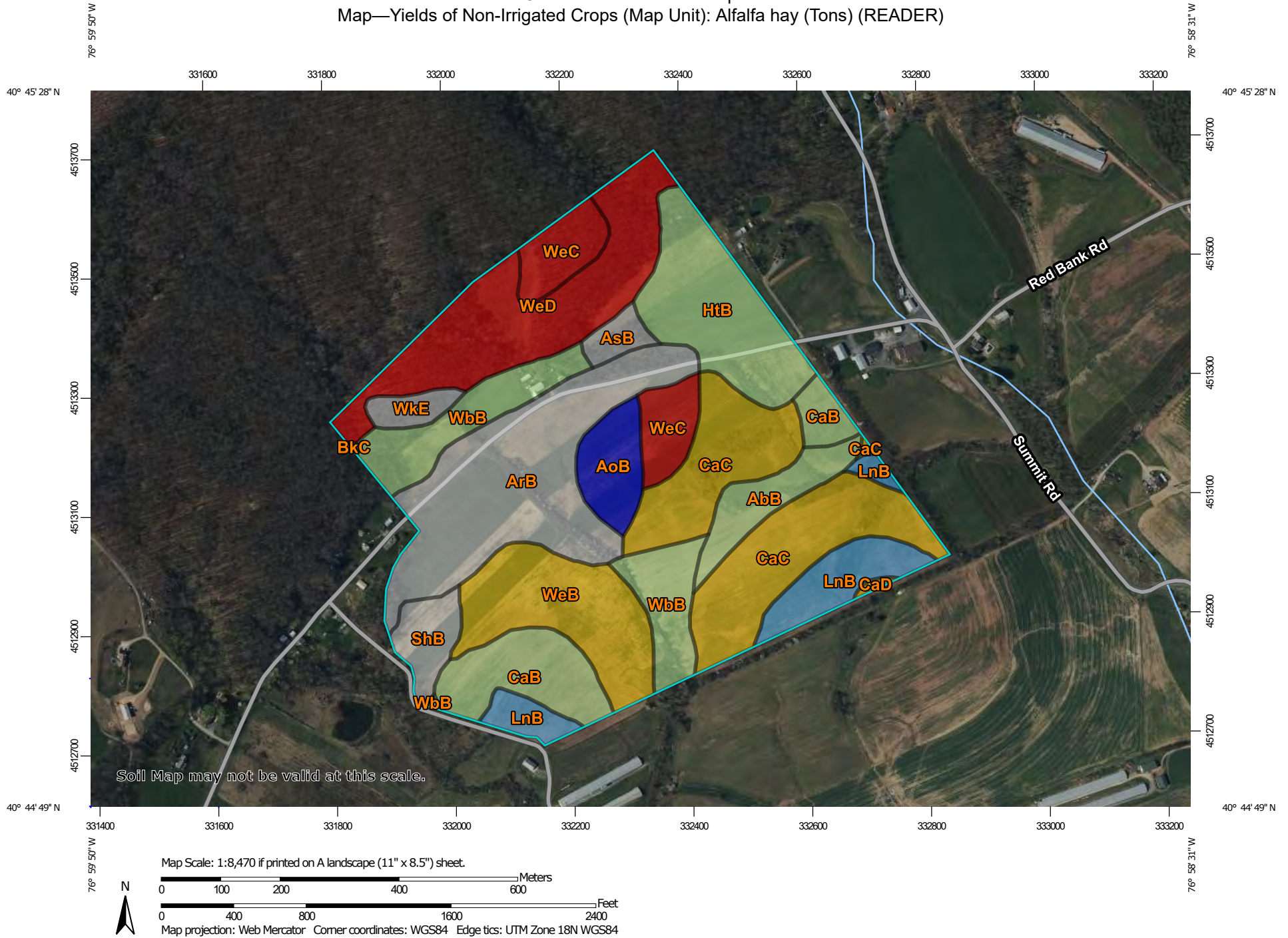
The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby areas and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

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The estimated yields reflect the productive capacity of each soil for the selected crop. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Custom Soil Resource Report
 Map—Yields of Non-Irrigated Crops (Map Unit): Alfalfa hay (Tons) (READER)



Custom Soil Resource Report

MAP LEGEND**Area of Interest (AOI)**
 Area of Interest (AOI)
Soils**Soil Rating Polygons**

-  ≤ 2.20
-  > 2.20 and ≤ 3.00
-  > 3.00 and ≤ 3.50
-  > 3.50 and ≤ 4.50
-  > 4.50 and ≤ 5.50
-  Not rated or not available

Soil Rating Lines

-  ≤ 2.20
-  > 2.20 and ≤ 3.00
-  > 3.00 and ≤ 3.50
-  > 3.50 and ≤ 4.50
-  > 4.50 and ≤ 5.50
-  Not rated or not available

Soil Rating Points

-  ≤ 2.20
-  > 2.20 and ≤ 3.00
-  > 3.00 and ≤ 3.50
-  > 3.50 and ≤ 4.50
-  > 4.50 and ≤ 5.50
-  Not rated or not available

Water Features
 Streams and Canals
Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background
 Aerial Photography
MAP INFORMATION

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Custom Soil Resource Report

**Table—Yields of Non-Irrigated Crops (Map Unit): Alfalfa hay
(Tons) (READER)**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	3.50	4.9	3.4%
AoB	Allenwood and Washington soils, 3 to 8 percent slopes	5.50	4.6	3.2%
ArB	Alvira silt loam, 3 to 8 percent slopes		23.4	16.2%
AsB	Alvira very stony silt loam, 0 to 8 percent slopes		1.7	1.2%
BkC	Berks channery silt loam, 8 to 15 percent slopes	3.00	0.0	0.0%
CaB	Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes	3.50	9.7	6.7%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	3.00	23.2	16.0%
CaD	Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes	3.00	0.2	0.2%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	3.50	13.2	9.1%
LnB	Leck kill shaly silt loam, 3 to 8 percent slopes	4.50	7.9	5.5%
ShB	Shelmadine silt loam, 3 to 8 percent slopes		3.5	2.4%
WbB	Watson silt loam, 3 to 8 percent slopes	3.50	12.2	8.5%
WeB	Weikert channery silt loam, 3 to 8 percent slopes	3.00	12.6	8.7%
WeC	Weikert channery silt loam, 8 to 15 percent slopes	2.20	7.4	5.1%
WeD	Weikert channery silt loam, 15 to 25 percent slopes	2.00	18.2	12.6%
WkE	Weikert and Klinesville shaly silt loams, steep		1.9	1.3%
Totals for Area of Interest			144.7	100.0%

Custom Soil Resource Report

Rating Options—Yields of Non-Irrigated Crops (Map Unit): Alfalfa hay (Tons) (READER)*Crop:* Alfalfa hay*Yield Units:* Tons*Aggregation Method:* No Aggregation Necessary*Tie-break Rule:* Higher**Yields of Non-Irrigated Crops (Map Unit): Corn (Bu) (READER)**

These are the estimated average yields per acre that can be expected of selected nonirrigated crops under a high level of management. In any given year, yields may be higher or lower than those indicated because of variations in rainfall and other climatic factors.

In the database, some states maintain crop yield data by individual map unit component and others maintain the data at the map unit level. Attributes are included in this application for both, although only one or the other is likely to contain data for any given geographic area. This attribute uses data maintained at the map unit level.

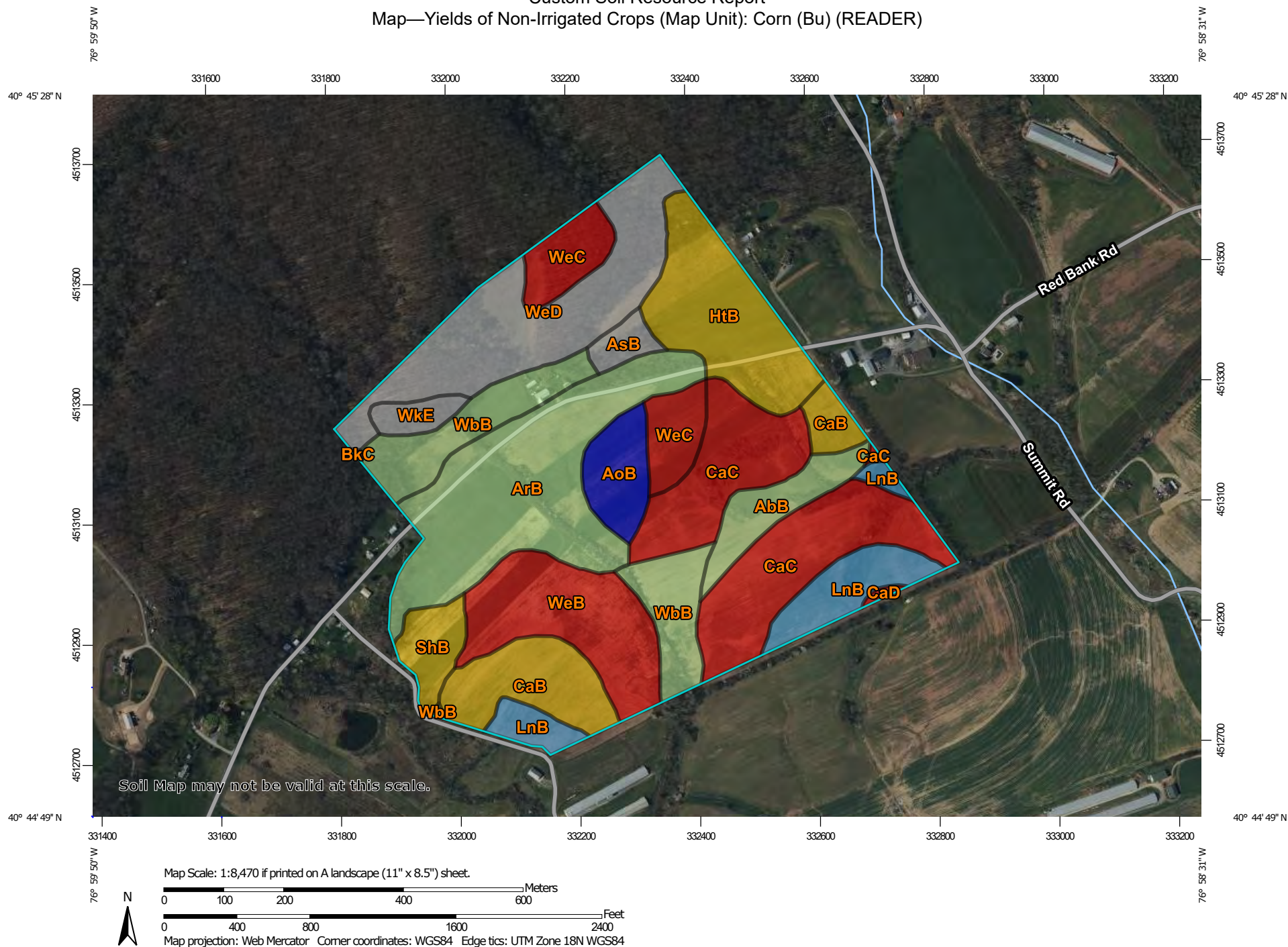
The yields are actually recorded as three separate values in the database. A low value and a high value indicate the range for the soil component. A "representative" value indicates the expected value for the component. For these yields, only the representative value is used.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby areas and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for the selected crop. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Custom Soil Resource Report
 Map—Yields of Non-Irrigated Crops (Map Unit): Corn (Bu) (READER)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  ≤ 75.00
-  > 75.00 and ≤ 85.00
-  > 85.00 and ≤ 100.00
-  > 100.00 and ≤ 125.00
-  > 125.00 and ≤ 135.00
-  Not rated or not available

Soil Rating Lines

-  ≤ 75.00
-  > 75.00 and ≤ 85.00
-  > 85.00 and ≤ 100.00
-  > 100.00 and ≤ 125.00
-  > 125.00 and ≤ 135.00
-  Not rated or not available

Soil Rating Points

-  ≤ 75.00
-  > 75.00 and ≤ 85.00
-  > 85.00 and ≤ 100.00
-  > 100.00 and ≤ 125.00
-  > 125.00 and ≤ 135.00
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

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Custom Soil Resource Report

**Table—Yields of Non-Irrigated Crops (Map Unit): Corn (Bu)
(READER)**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	100.00	4.9	3.4%
AoB	Allenwood and Washington soils, 3 to 8 percent slopes	135.00	4.6	3.2%
ArB	Alvira silt loam, 3 to 8 percent slopes	95.00	23.4	16.2%
AsB	Alvira very stony silt loam, 0 to 8 percent slopes		1.7	1.2%
BkC	Berks channery silt loam, 8 to 15 percent slopes	75.00	0.0	0.0%
CaB	Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes	80.00	9.7	6.7%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	75.00	23.2	16.0%
CaD	Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes	70.00	0.2	0.2%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	80.00	13.2	9.1%
LnB	Leck kill shaly silt loam, 3 to 8 percent slopes	125.00	7.9	5.5%
ShB	Shelmadine silt loam, 3 to 8 percent slopes	85.00	3.5	2.4%
WbB	Watson silt loam, 3 to 8 percent slopes	100.00	12.2	8.5%
WeB	Weikert channery silt loam, 3 to 8 percent slopes	70.00	12.6	8.7%
WeC	Weikert channery silt loam, 8 to 15 percent slopes	70.00	7.4	5.1%
WeD	Weikert channery silt loam, 15 to 25 percent slopes		18.2	12.6%
WkE	Weikert and Klinesville shaly silt loams, steep		1.9	1.3%
Totals for Area of Interest			144.7	100.0%

Custom Soil Resource Report

Rating Options—Yields of Non-Irrigated Crops (Map Unit): Corn (Bu) (READER)*Crop:* Corn*Yield Units:* Bu*Aggregation Method:* No Aggregation Necessary*Tie-break Rule:* Higher**Yields of Non-Irrigated Crops (Map Unit): Wheat (Bu) (READER)**

These are the estimated average yields per acre that can be expected of selected nonirrigated crops under a high level of management. In any given year, yields may be higher or lower than those indicated because of variations in rainfall and other climatic factors.

In the database, some states maintain crop yield data by individual map unit component and others maintain the data at the map unit level. Attributes are included in this application for both, although only one or the other is likely to contain data for any given geographic area. This attribute uses data maintained at the map unit level.

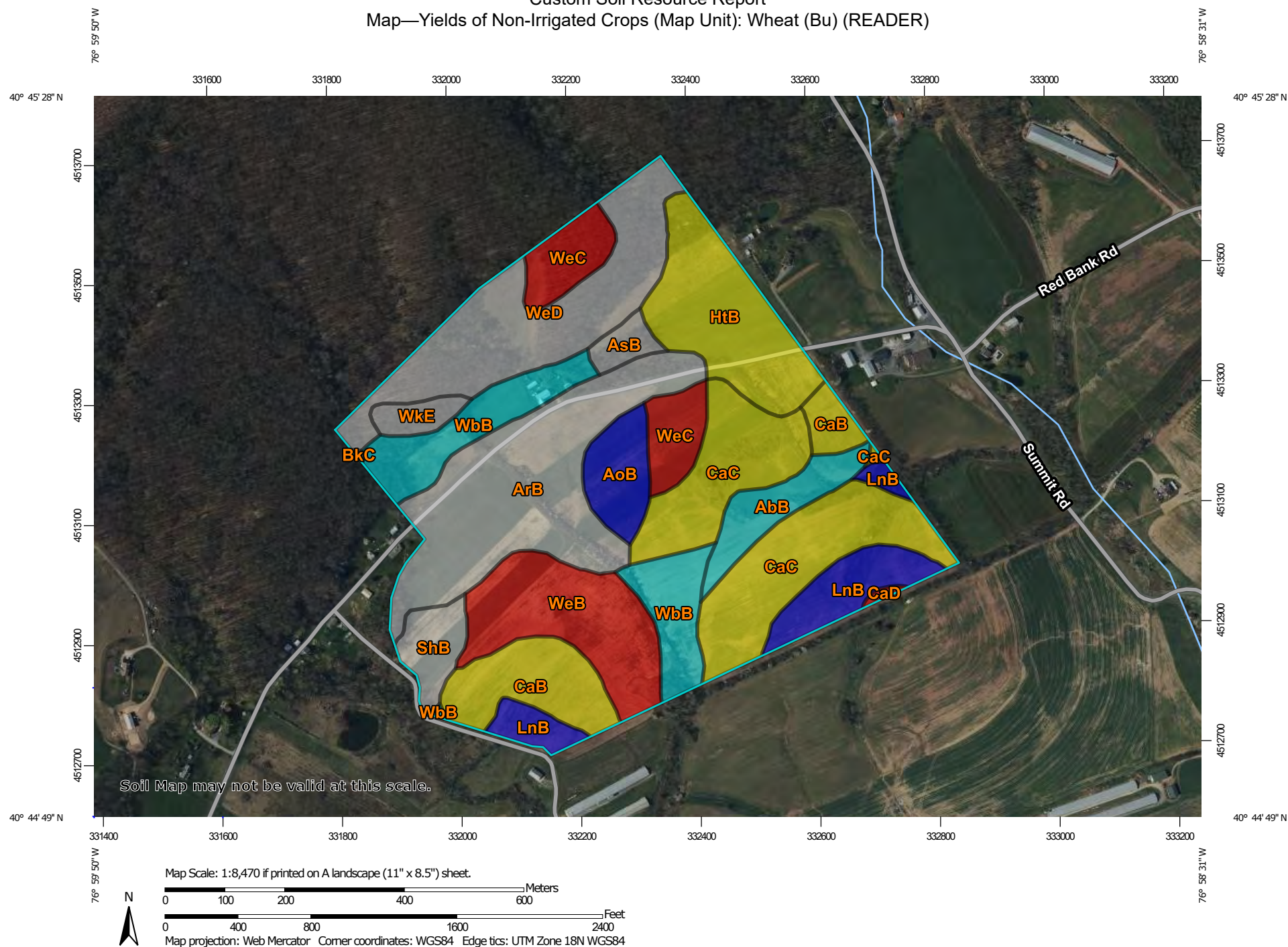
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The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby areas and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for the selected crop. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Custom Soil Resource Report
 Map—Yields of Non-Irrigated Crops (Map Unit): Wheat (Bu) (READER)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 ≤ 30.00
 > 30.00 and ≤ 35.00
 > 35.00 and ≤ 40.00
 > 40.00 and ≤ 50.00
 Not rated or not available

Soil Rating Lines

 ≤ 30.00
 > 30.00 and ≤ 35.00
 > 35.00 and ≤ 40.00
 > 40.00 and ≤ 50.00
 Not rated or not available

Soil Rating Points

 ≤ 30.00
 > 30.00 and ≤ 35.00
 > 35.00 and ≤ 40.00
 > 40.00 and ≤ 50.00
 Not rated or not available

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: Snyder County, Pennsylvania
 Survey Area Data: Version 19, Sep 4, 2025

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

Date(s) aerial images were photographed: Apr 13, 2023—May 17, 2023

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.

Custom Soil Resource Report

**Table—Yields of Non-Irrigated Crops (Map Unit): Wheat (Bu)
(READER)**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AbB	Albrights silt loam, 3 to 8 percent slopes	40.00	4.9	3.4%
AoB	Allenwood and Washington soils, 3 to 8 percent slopes	50.00	4.6	3.2%
ArB	Alvira silt loam, 3 to 8 percent slopes		23.4	16.2%
AsB	Alvira very stony silt loam, 0 to 8 percent slopes		1.7	1.2%
BkC	Berks channery silt loam, 8 to 15 percent slopes		0.0	0.0%
CaB	Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes	35.00	9.7	6.7%
CaC	Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes	35.00	23.2	16.0%
CaD	Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes	30.00	0.2	0.2%
HtB	Hartleton channery silt loam, 3 to 8 percent slopes	35.00	13.2	9.1%
LnB	Leck kill shaly silt loam, 3 to 8 percent slopes	50.00	7.9	5.5%
ShB	Shelmadine silt loam, 3 to 8 percent slopes		3.5	2.4%
WbB	Watson silt loam, 3 to 8 percent slopes	40.00	12.2	8.5%
WeB	Weikert channery silt loam, 3 to 8 percent slopes	30.00	12.6	8.7%
WeC	Weikert channery silt loam, 8 to 15 percent slopes	30.00	7.4	5.1%
WeD	Weikert channery silt loam, 15 to 25 percent slopes		18.2	12.6%
WkE	Weikert and Klinesville shaly silt loams, steep		1.9	1.3%
Totals for Area of Interest			144.7	100.0%

Custom Soil Resource Report

Rating Options—Yields of Non-Irrigated Crops (Map Unit): Wheat (Bu) (READER)

Crop: Wheat

Yield Units: Bu

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Higher

Appendix

Detailed Soil Map Unit Descriptions

The following pages contain the full USDA-NRCS technical descriptions for each soil map unit identified on the property. Each entry covers the soil setting, typical profile, drainage class, depth to water table, available water supply, land capability classification, and interpretive groups.

These descriptions are provided for agronomic reference and due diligence. Soil units include Albrights, Allenwood and Washington, Alvira, Berks, Calvin-Klinesville, Hartleton, Leck Kill, Shelmadine, Watson, and Weikert series, among others mapped within the survey area.

Source: USDA Natural Resources Conservation Service, Web Soil Survey — Custom Soil Resource Report for Snyder County, Pennsylvania.

Custom Soil Resource Report

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 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.

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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 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.

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Snyder County, Pennsylvania**AbB—Albrights silt loam, 3 to 8 percent slopes****Map Unit Setting**

National map unit symbol: l4qg
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): Footslope, toeslope
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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Meckesville

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

Alvira

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

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

AoB—Allenwood and Washington soils, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: l4qk
Landscape: Uplands
Elevation: 300 to 2,800 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 44 to 57 degrees F
Frost-free period: 130 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Allenwood and similar soils: 50 percent
Washington and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the map unit.

Description of Allenwood**Setting**

Landscape: Uplands
Landform: Valley sides
Landform position (two-dimensional): Footslope

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Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Old till derived from sedimentary rock

Typical profile

H1 - 0 to 11 inches: gravelly silt loam
H2 - 11 to 56 inches: gravelly silty clay loam
H3 - 56 to 89 inches: very gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 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 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F147XY003PA - Mixed Limestone Upland
Hydric soil rating: No

Description of Washington**Setting**

Landscape: Uplands
Landform: Valley sides
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from limestone and/or old glacial drift

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 48 inches: gravelly clay loam
H3 - 48 to 62 inches: clay loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 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: High (about 10.5 inches)

Custom Soil Resource Report

Interpretive groups*Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 2e*Hydrologic Soil Group:* B*Ecological site:* F147XY003PA - Mixed Limestone Upland*Hydric soil rating:* No**Minor Components****Bedington***Percent of map unit:* 5 percent*Hydric soil rating:* No**Hartleton***Percent of map unit:* 5 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**Watson***Percent of map unit:* 5 percent*Hydric soil rating:* No**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**ArB—Alvira silt loam, 3 to 8 percent slopes****Map Unit Setting***National map unit symbol:* l4qn*Elevation:* 390 to 1,870 feet*Mean annual precipitation:* 36 to 56 inches*Mean annual air temperature:* 46 to 54 degrees F*Frost-free period:* 130 to 160 days*Farmland classification:* Farmland of statewide importance**Map Unit Composition***Alvira and similar soils:* 82 percent*Minor components:* 18 percent*Estimates are based on observations, descriptions, and transects of the mapunit.*

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Description of Alvira**Setting**

Landform: Glaciated hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Till

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 21 inches: gravelly silt loam
H3 - 21 to 60 inches: very gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 28 inches to fragipan
Drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F147XY006PA - Mixed Limestone Lower Slope
Hydric soil rating: No

Minor Components**Watson**

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

Shelmadine

Percent of map unit: 8 percent
Landform: Drainageways
Hydric soil rating: Yes

AsB—Alvira very stony silt loam, 0 to 8 percent slopes**Map Unit Setting**

National map unit symbol: l4qq
Elevation: 490 to 2,000 feet
Mean annual precipitation: 36 to 56 inches

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Mean annual air temperature: 46 to 54 degrees F

Frost-free period: 130 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Alvira and similar soils: 80 percent

Minor components: 20 percent

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

Description of Alvira**Setting**

Landform: Glaciated hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluvium

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Till

Typical profile

H1 - 0 to 9 inches: gravelly silt loam

H2 - 9 to 21 inches: silt loam

H3 - 21 to 60 inches: very gravelly silt loam

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 15 to 28 inches to fragipan

Drainage class: Somewhat poorly drained

Runoff class: Very high

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

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: F147XY006PA - Mixed Limestone Lower Slope

Hydric soil rating: No

Minor Components**Watson**

Percent of map unit: 10 percent

Hydric soil rating: No

Shelmadine

Percent of map unit: 10 percent

Landform: Depressions

Hydric soil rating: Yes

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BkC—Berks channery silt loam, 8 to 15 percent slopes**Map Unit Setting***National map unit symbol:* 2sgcg*Landscape:* Hills, mountains*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***Landscape:* Hills, mountains*Landform:* Ridges, Mountain slopes*Landform position (two-dimensional):* Summit, shoulder, backslope*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*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

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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

Landscape: Hills

Landform: Ridges

Landform position (two-dimensional): Shoulder, backslope

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

Landscape: Hills

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

CaB—Calvin-Klinesville shaly silt loams, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 14r3

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

Klinesville and similar soils: 30 percent

Minor components: 20 percent

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

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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:* 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):* 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):* 2e*Hydrologic Soil Group:* B*Ecological site:* F147XY008PA - Shallow Mixed Sedimentary Upland*Hydric soil rating:* No**Description of Klinsville****Setting***Landform:* Ridges, Valleys*Landform position (two-dimensional):* Shoulder, backslope*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:* 3 to 8 percent*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock*Drainage class:* Somewhat excessively drained*Runoff class:* Medium*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): 3e
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

CaC—Calvin-Klinesville shaly silt loams, 8 to 15 percent slopes**Map Unit Setting**

National map unit symbol: 14r4
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
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

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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: Ridges, Valleys
Landform position (two-dimensional): Shoulder, backslope
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
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

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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

CaD—Calvin-Klinesville shaly silt loams, 15 to 25 percent slopes**Map Unit Setting**

National map unit symbol: l4r5

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

Calvin and similar soils: 50 percent

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: 15 to 25 percent

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

Custom Soil Resource Report

Drainage class: Well 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: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland
Hydric soil rating: No

Description of Klinesville**Setting**

Landform: Ridges, Valleys
Landform position (two-dimensional): Shoulder, backslope
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: 15 to 25 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): 6e
Hydrologic Soil Group: D
Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland
Hydric soil rating: No

Minor Components**Weikert**

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

Custom Soil Resource Report

Berks*Percent of map unit: 5 percent**Hydric soil rating: No***Leck kill***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: 14rm**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**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*

Custom Soil Resource Report

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

Leck kill

Percent of map unit: 5 percent

Hydric soil rating: No

Allenwood

Percent of map unit: 5 percent

Hydric soil rating: No

Weikert

Percent of map unit: 5 percent

Hydric soil rating: No

Bedington

Percent of map unit: 5 percent

Hydric soil rating: No

LnB—Leck kill shaly silt loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: l4s3

Landscape: Mountains

Elevation: 300 to 2,800 feet

Mean annual precipitation: 34 to 50 inches

Mean annual air temperature: 45 to 57 degrees F

Frost-free period: 130 to 200 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Leck kill and similar soils: 85 percent

Minor components: 15 percent

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

Description of Leck Kill**Setting**

Landscape: Mountains

Landform position (three-dimensional): Mountaintop

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: 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: 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: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
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

Klinesville

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

ShB—Shelmadine silt loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: l4sm
Elevation: 430 to 1,850 feet
Mean annual precipitation: 36 to 46 inches

Custom Soil Resource Report

Mean annual air temperature: 40 to 60 degrees F

Frost-free period: 130 to 220 days

Farmland classification: Not prime farmland

Map Unit Composition

Shelmadine and similar soils: 80 percent

Minor components: 20 percent

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

Description of Shelmadine**Setting**

Landform: Drainageways

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Loamy till

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 24 inches: silty clay loam

H3 - 24 to 50 inches: channery loam

H4 - 50 to 70 inches: channery loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 18 to 30 inches to fragipan

Drainage class: Poorly drained

Runoff class: Very high

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

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: C/D

Ecological site: F147XY011PA - Poorly Drained Fine Mixed Floodplain

Hydric soil rating: Yes

Minor Components**Watson**

Percent of map unit: 10 percent

Hydric soil rating: No

Albrights

Percent of map unit: 5 percent

Hydric soil rating: No

Alvira

Percent of map unit: 5 percent

Landform: Glaciated hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluvium

Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Concave

Hydric soil rating: No

WbB—Watson silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: l4sy

Elevation: 430 to 1,850 feet

Mean annual precipitation: 36 to 46 inches

Mean annual air temperature: 40 to 60 degrees F

Frost-free period: 130 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Watson and similar soils: 80 percent

Minor components: 20 percent

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

Description of Watson

Setting

Landform: Valley sides

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Old till derived from sedimentary rock

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 27 inches: gravelly silty clay loam

H3 - 27 to 45 inches: gravelly clay loam

H4 - 45 to 61 inches: channery loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: High

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

Depth to water table: About 18 to 33 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C

Ecological site: F147XY006PA - Mixed Limestone Lower Slope

Custom Soil Resource Report

Hydric soil rating: No

Minor Components**Allenwood**

Percent of map unit: 10 percent

Hydric soil rating: No

Shelmadine

Percent of map unit: 5 percent

Landform: Drainageways

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Alvira

Percent of map unit: 5 percent

Landform: Glaciated hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: No

WeB—Weikert channery silt loam, 3 to 8 percent slopes**Map Unit Setting**

National map unit symbol: 2v4vr

Landscape: Hills

Elevation: 360 to 1,700 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

Weikert and similar soils: 85 percent

Minor components: 15 percent

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

Description of Weikert**Setting**

Landscape: Hills

Landform: Ridges

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gray and brown acid residuum weathered from shale and siltstone and/or fine grained sandstone

Custom Soil Resource Report

Typical profile

Ap - 0 to 7 inches: channery silt loam
Bw - 7 to 14 inches: very channery silt loam
C - 14 to 18 inches: extremely channery silt loam
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
 (0.06 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland
Other vegetative classification: Droughty Shales (SD2)
Hydric soil rating: No

Minor Components**Berks**

Percent of map unit: 9 percent
Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Bedington

Percent of map unit: 5 percent
Landform: Shale hillslopes, Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Brinkerton

Percent of map unit: 1 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave

Custom Soil Resource Report

Hydric soil rating: Yes

WeC—Weikert channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2v4w5

Landscape: Hills

Elevation: 360 to 3,410 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: Not prime farmland

Map Unit Composition

Weikert and similar soils: 85 percent

Minor components: 15 percent

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

Description of Weikert

Setting

Landscape: Hills

Landform: Ridges

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Gray and brown acid residuum weathered from shale and siltstone and/or fine grained sandstone

Typical profile

Ap - 0 to 7 inches: channery silt loam

Bw - 7 to 10 inches: extremely channery silt loam

C - 10 to 15 inches: extremely channery silt loam

R - 15 to 25 inches: 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

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

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

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland
Other vegetative classification: Droughty Shales (SD2)
Hydric soil rating: No

Minor Components**Berks**

Percent of map unit: 9 percent
Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Bedington

Percent of map unit: 5 percent
Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Brinkerton

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

WeD—Weikert channery silt loam, 15 to 25 percent slopes**Map Unit Setting**

National map unit symbol: 2v4vs
Landscape: Hills
Elevation: 340 to 4,040 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: Not prime farmland

Custom Soil Resource Report

Map Unit Composition

Weikert and similar soils: 85 percent

Minor components: 15 percent

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

Description of Weikert**Setting**

Landscape: Hills

Landform: Ridges

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Gray and brown acid residuum weathered from shale and siltstone and/or fine grained sandstone

Typical profile

A - 0 to 6 inches: channery silt loam

Bw - 6 to 12 inches: very channery silt loam

C - 12 to 15 inches: extremely channery silt loam

R - 15 to 25 inches: bedrock

Properties and qualities

Slope: 15 to 25 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): Moderately low to high (0.06 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

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

Available water supply, 0 to 60 inches: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D

Ecological site: F147XY008PA - Shallow Mixed Sedimentary Upland

Other vegetative classification: Droughty Shales (SD3)

Hydric soil rating: No

Minor Components**Berks**

Percent of map unit: 9 percent

Landscape: Hills

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex, linear

Hydric soil rating: No

Custom Soil Resource Report

Ernest

Percent of map unit: 3 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Wharton

Percent of map unit: 2 percent
Landscape: Hills
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluvium, head slope, side slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Hartleton

Percent of map unit: 1 percent
Landscape: Valleys
Landform: Ridges
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

WkE—Weikert and Klinesville shaly silt loams, steep**Map Unit Setting**

National map unit symbol: l4t3
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

Custom Soil Resource Report

Landform position (two-dimensional): Shoulder, backslope
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: Ridges, Valleys
Landform position (two-dimensional): Shoulder, backslope
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)
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)

Custom Soil Resource Report

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