



United States Department of Agriculture

Pennsylvania

Natural Resources Conservation Service

PA Boot Camp Level I

Soil Survey Basics

Soil Survey Basics



- ✓ *Identify Resource Concerns*
- ✓ *Select Conservation Practices*



United States Department of Agriculture

National Cooperative Soil Survey (NCSS)

Soil surveys are made by NRCS in cooperation with other Federal, State, and local agencies; private entities; and universities.

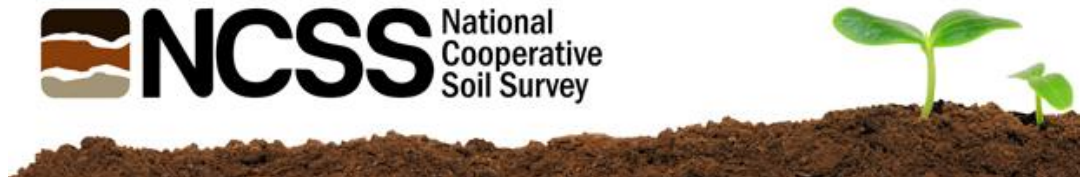
NRCS Soil and Plant Science Division (SPSD)

Oversees national soil survey activities, including coordination of NCSS activities, soil survey staff, soil survey reports, and soils information used in NRCS policy and programs.

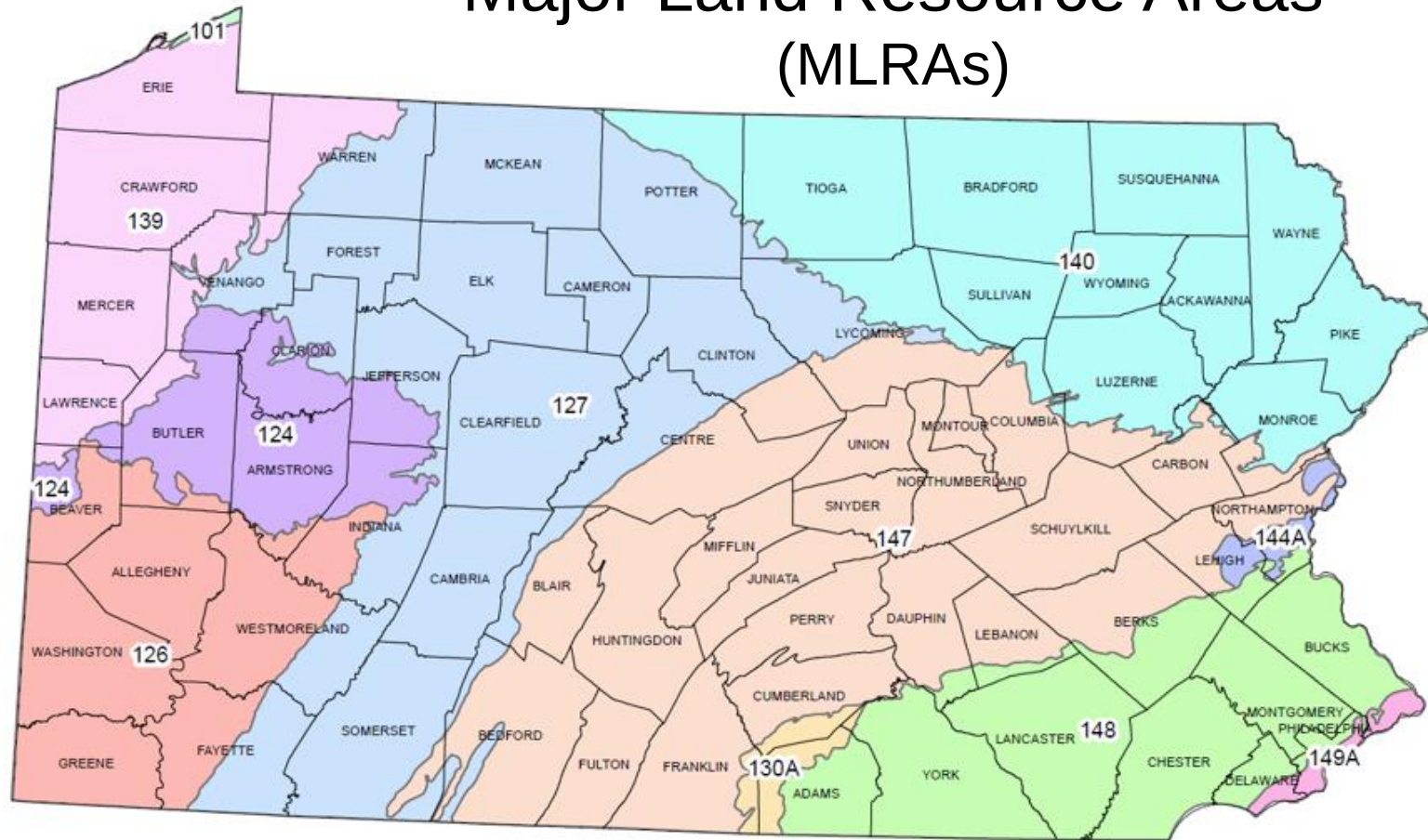
MLRA Soil Survey Offices

Responsible for conducting local soil survey activities.

United States Department of Agriculture



Major Land Resource Areas (MLRAs)



Major Land Resource Areas (MLRAs)

101 - Ontario-Erie Plain and Finger Lakes Region	139 - Lake Erie Glaciated Plateau
124 - Western Allegheny Plateau	140 - Glaciated Allegheny Plateau and Catskill Mountains
126 - Central Allegheny Plateau	144A - New England and Eastern New York Upland, Southern Part
127 - Eastern Allegheny Plateau and Mountains	147 - Northern Appalachian Ridges and Valleys
130A - Northern Blue Ridge	148 - Northern Piedmont
	149A - Northern Coastal Plain

Other Soil Survey Acronyms

SSURGO - *Soil Survey Geographic Database* (Digital soils data)

- > **SSURGO** - is the *most detailed* county level data
- > **STATSGO** - is less detailed state-wide map
- > **NATSGO** - is a very general soil map of the entire U.S.

NASIS - National Soil Information System

WSS – Web Soil Survey is official Soil Survey Data

Soils 2026

Completion of an authoritative initial Soil Survey by 2026 through varied and novel approaches.

Coverage in Web Soil Survey for 390 million remaining acres currently without digital data.

Pennsylvania NRCS Soils/GIS Staff

Yuri Plowden, State Soil Scientist

John Chibirka, Resource Soil Scientist, Southeast PA

Keith Shadle, Resource Soil Scientist, Northeast PA

Tyson Myers, Resource Soil Scientist, Western PA

Kefeni Kejela, Urban Cons/Soil Scientist, Leesport, PA

Tyson Myers, Resource Soil Scientist, State Office

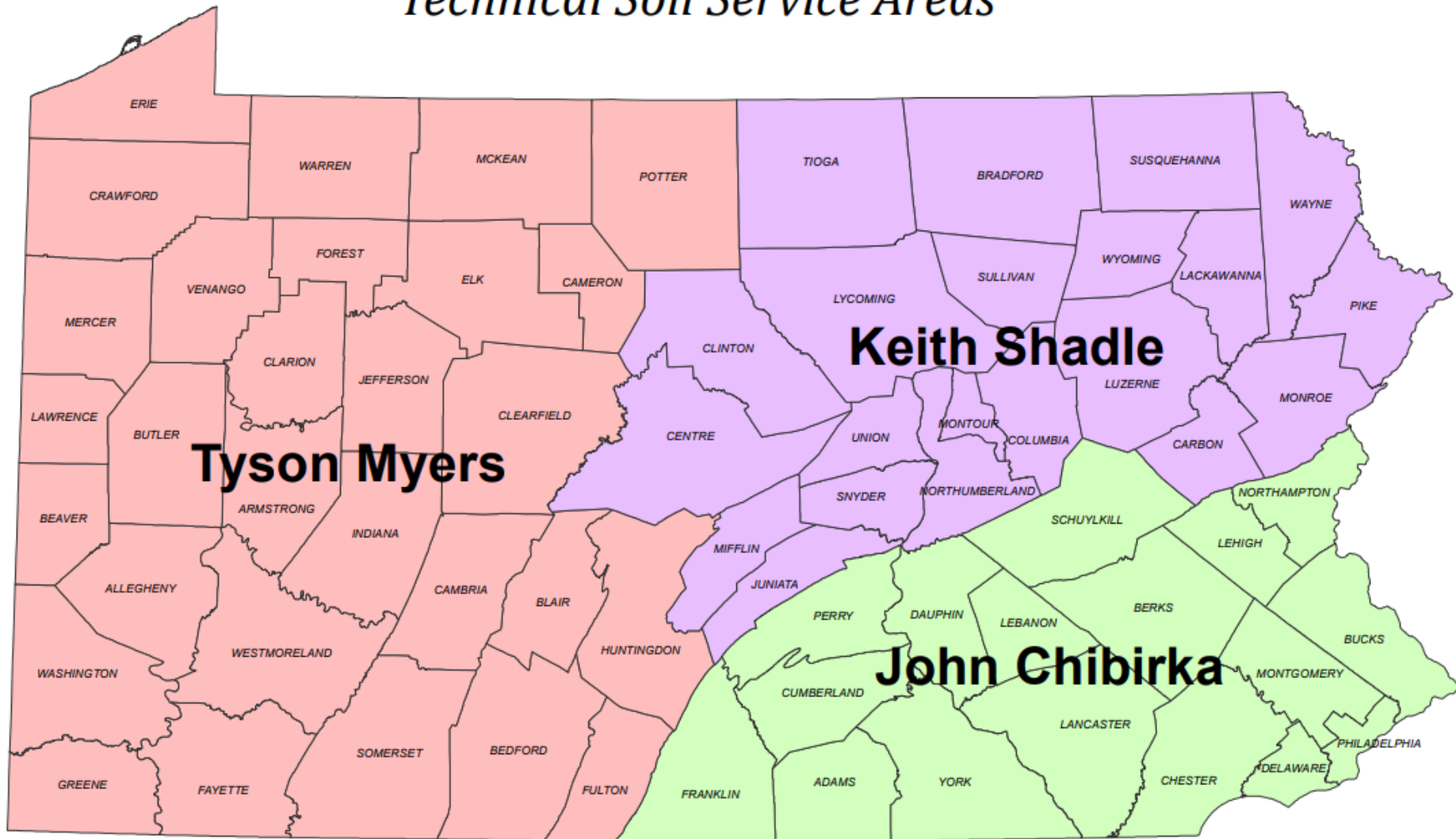
Marcie Dunn, State GIS Specialist

Anthony Anastasi, State Business Tools Coordinator

Soil Survey Offices that are responsible for PA data: Mill Hall, PA, Morgantown, WV, Frederick, MD, Marietta, OH, Belmont, NY



Technical Soil Service Areas



How to request Technical Soil Services:

Contact State Soil Scientist - Yuri Plowden, yuri.plowden@usda.gov

Or directly contact the Resource Soil Scientist in your area,

john.chibirka@usda.gov

keith.shadle@usda.gov

tyson.myers@usda.gov

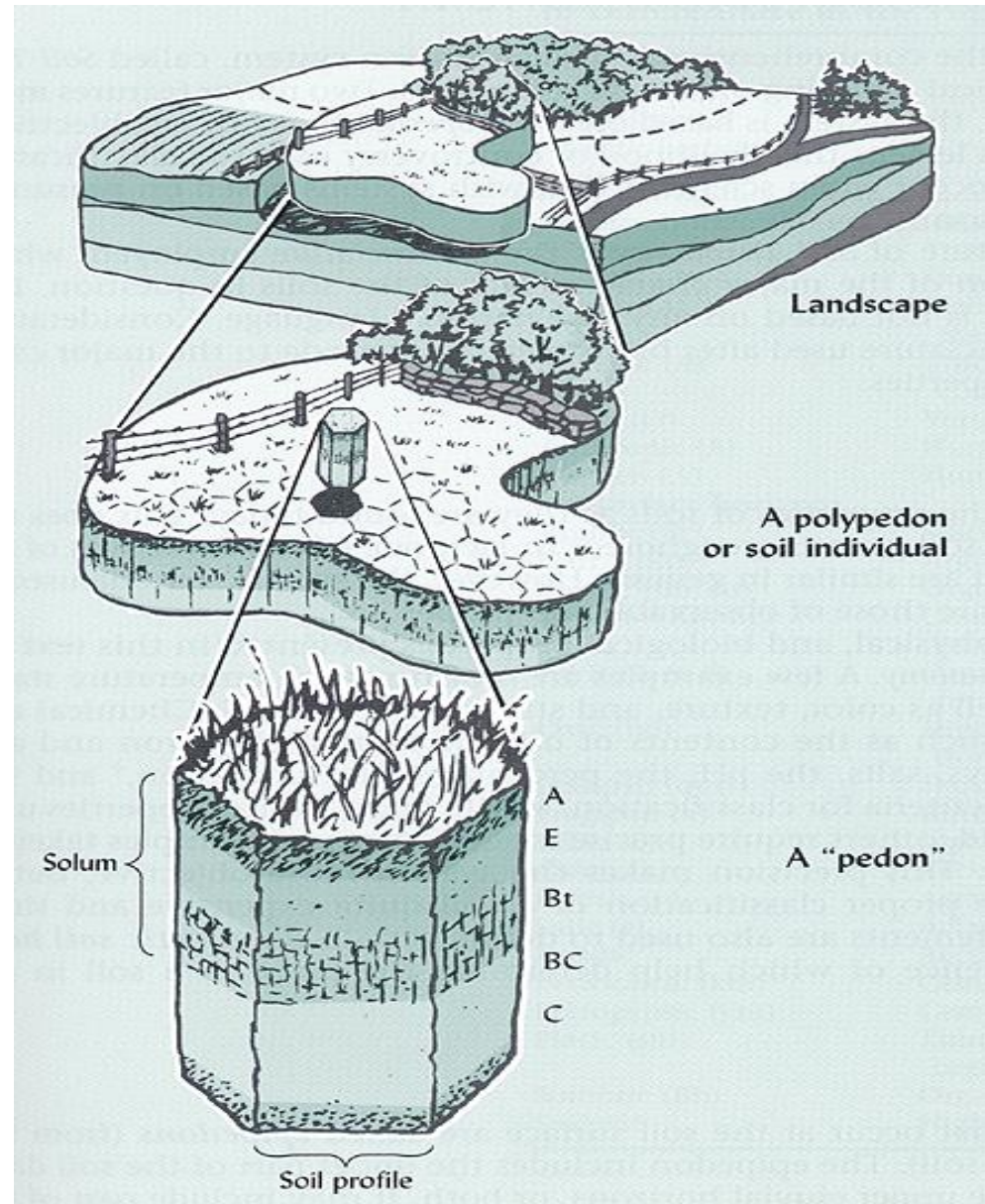
Soil Survey Basics

- Delineate different kinds of soils across the landscape.
- Predict soil behavior for different land uses.
- Highlight limitations and hazards inherent in the soil.



Soil Series

- Basic grouping of soils with similar horizons and characteristics.
- Berks
- Brinkerton
- Hagerstown
- Hazleton
- Holly
- Weikert



Map Units

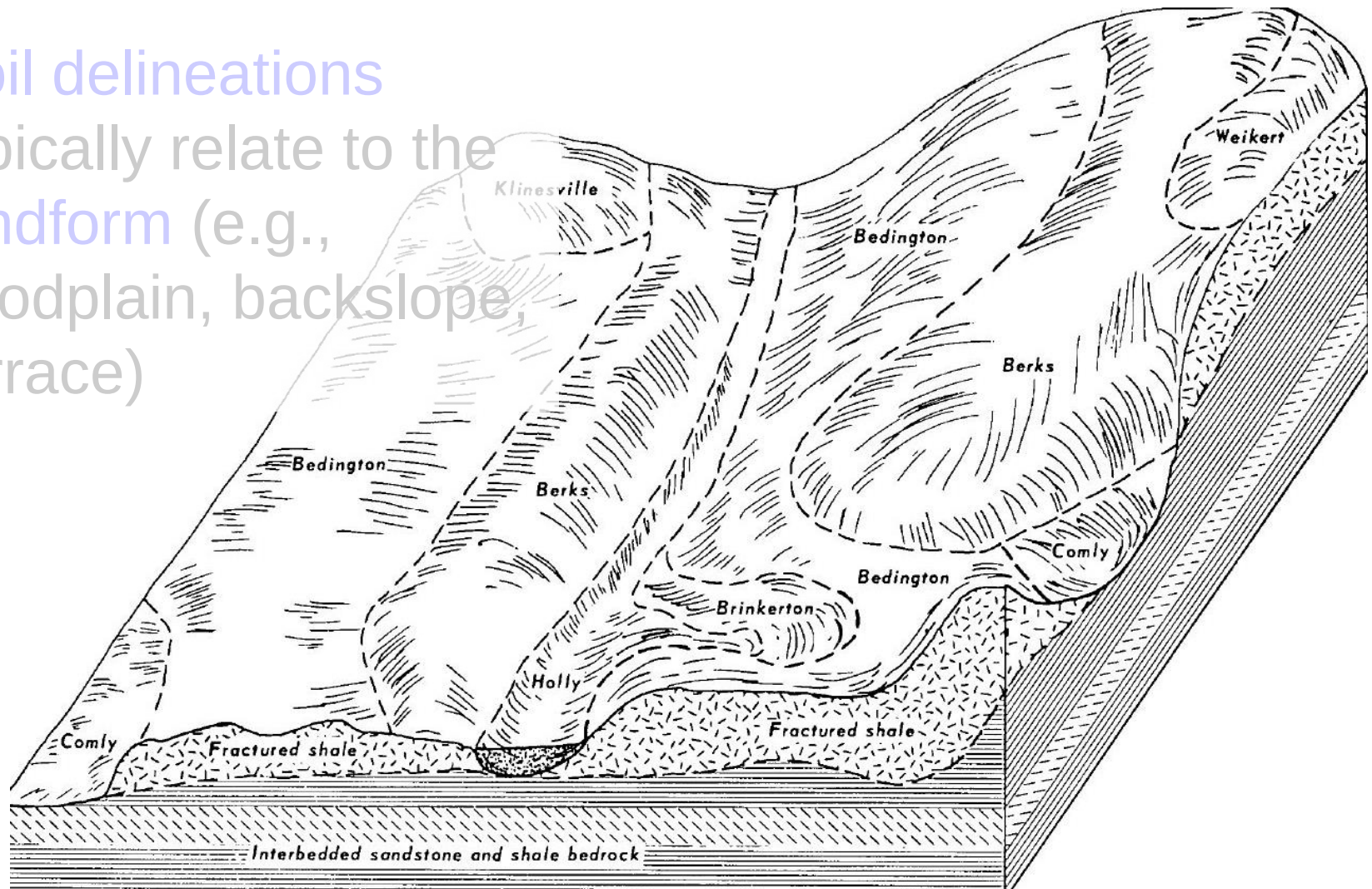
- The basic unit of a soils map.
- Each individual area of soil on a map is a *delineation*.



- Soil delineation boundaries are drawn wherever there is a **significant change** in the type of soil.

Map Unit Design – Landscape Position

Soil delineations typically relate to the landform (e.g., floodplain, backslope, terrace)



Map Unit Components

Map Unit Legend			
Dauphin County, Pennsylvania (PA043)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
At	Atkins silt loam	3.6	3.7%
BeB2	Bedington shaly silt loam, 3 to 8 percent slopes, moderately eroded	0.4	0.4%
BkB2	Berks shaly silt loam, 3 to 8 percent slopes, moderately eroded	63.6	65.3%
BkC2	Berks shaly silt loam, 8 to 15 percent slopes, moderately eroded	19.3	19.8%
BtA	Brinkerton and Armagh silt loams, 0 to 3 percent slopes	4.6	4.7%
CoB2	Comly silt loam, 2 to 8 percent slopes, moderately eroded	2.4	2.4%
KaB2	Klinesville shaly silt loam, 3 to 8 percent slopes, moderately eroded	2.2	2.2%
KaC2	Klinesville shaly silt loam, 8 to 15 percent slopes, moderately eroded	1.1	1.1%
Ph	Philo silt loam	0.3	0.3%
WeC2	Weikert shaly silt loam, 5 to 15 percent slopes, moderately eroded	0.0	0.0%
Totals for Area of Interest		97.5	100.0%

- Map units are not 100% pure
- Map units take the name of their **Major Components**.
- Inclusions within the map unit are called **Minor Components**.

Map Unit Components

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

Map Unit Composition

Berks and similar soils: 85 percent

Minor components: 15 percent

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

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

Other vegetative classification: Droughty Shales

Hydric soil rating: No

Brinkerton

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Footslope

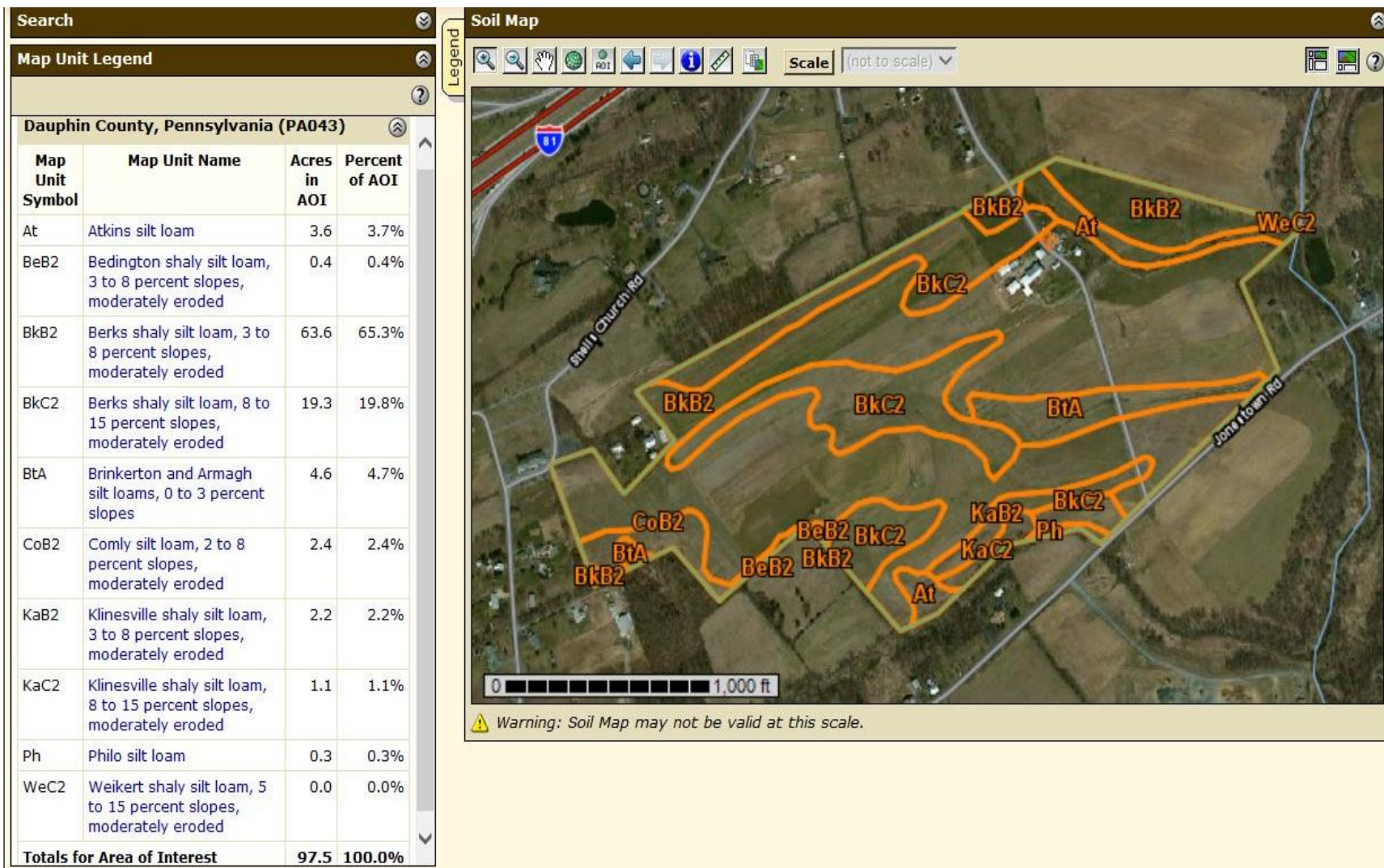
Landform position (three-dimensional): Base slope

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Soils Map and Legend



Map Information



MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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.

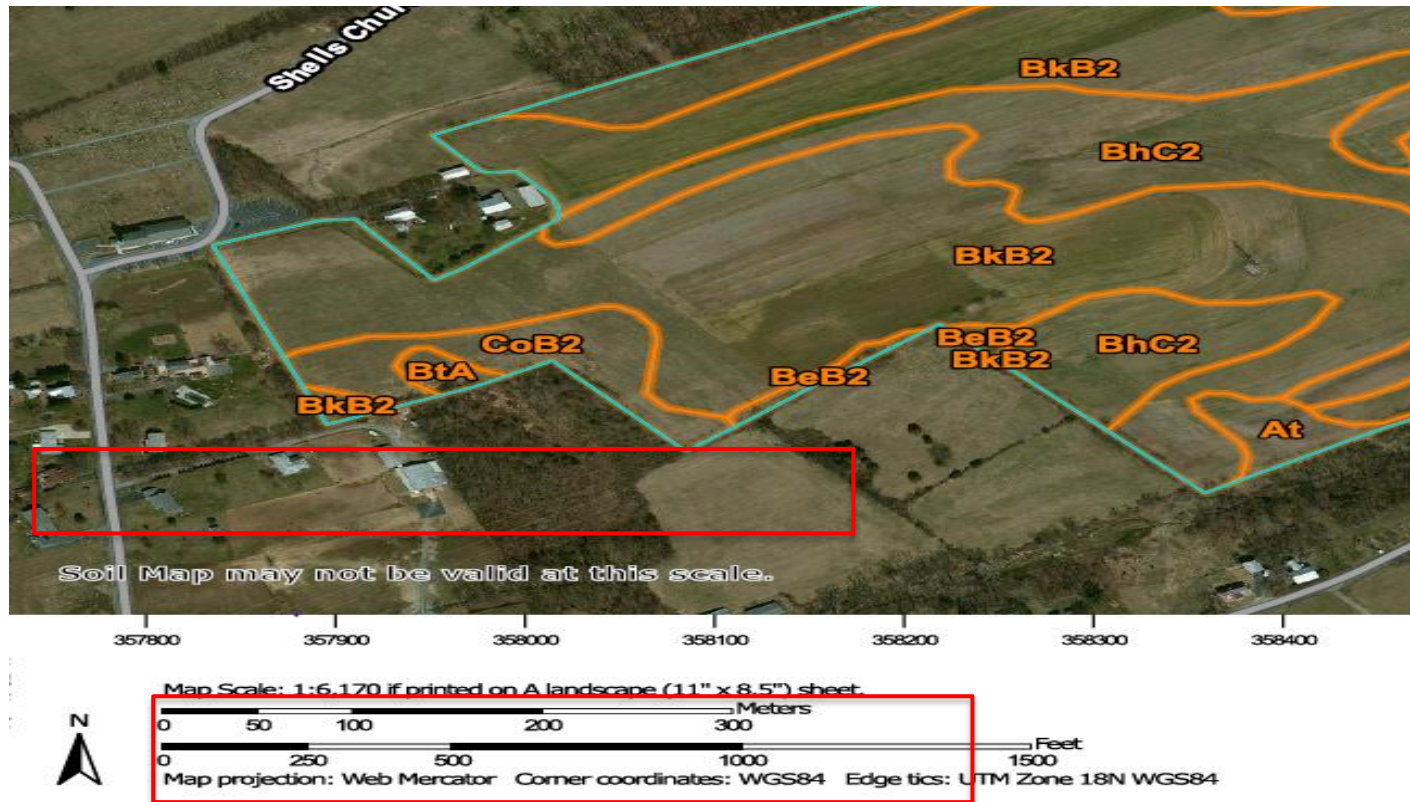
Soil Survey Area: Dauphin County, Pennsylvania
Survey Area Data: Version 15, Sep 19, 2018

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

Date(s) aerial images were photographed: Mar 29, 2011—Apr 14, 2011

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.

Soil Map Scale vs. Original Soil Survey



Map Scale

Table 2-2. Guide to Map Scale and Minimum Delineation Size

Map Scale	Inches per Mile	Minimum size delineation ¹	
		acres	hectares
1:7,920	8.00	0.62	0.25
1:10,000	6.34	1.00	0.41
1:12,000	5.25	1.43	0.57
1:15,840	4.00	2.5	1.0
1:20,000	3.17	4.0	1.6
1:24,000 (7.5')	2.64	5.7	2.3

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



You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:20,000. The design of map units and the level of detail shown in the resulting soil map are dependent on that map 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.



United States Department of Agriculture

Soils Information

 **FIELD OFFICE TECHNICAL GUIDE**

Welcome to NRCS Field Office Technical Guide (FOTG)

Select a state for documents.

State:

[Document Tree](#) [Document Search](#) [Recently Changed](#)

[Keyboard navigation instructions](#)

Section I

Section II

Soils Information
Documents (2)
Pub



Home About Soils Help Contact Us

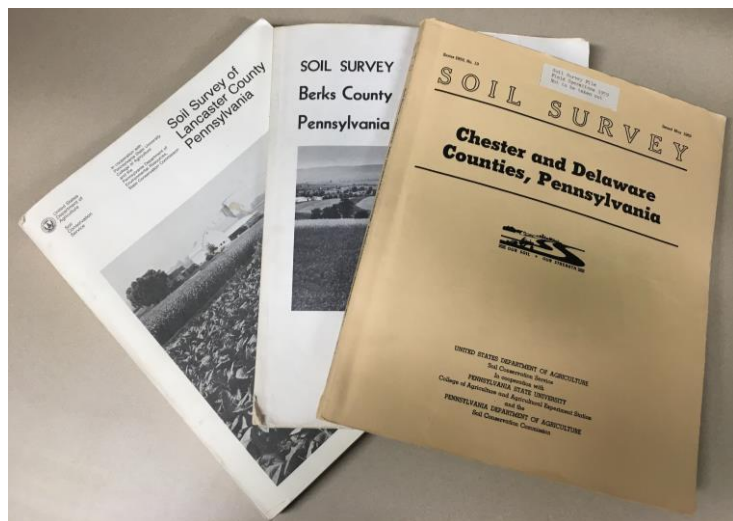
Web Soil Survey Home

et powerful way
nd use soil data.



I Want To...

- Start Web Soil Survey (WSS)
- Know Web Soil Survey



SoilWeb UCDAVIS NRCS University of California Agriculture and Natural Resources

[Link to WSS](#)

Berks shaly silt loam, 3 to 8 percent slopes, moderately eroded (BkB2)

▲ Map Unit Composition

85% - [Berks](#)
Geomorphic Position: hillslopes / Summit

3% - [Bedington](#)

3% - [Ernest](#)

2% - [Blairton](#)

2% - [Weikert](#)

▼ Map Unit Data

▲ Survey Metadata

Soil Survey Area: PA043 ?

Scale: 1:16,000 ?

Published: 1967 ?

Last Export: Sep 19 2018 ?





United States Department of Agriculture

Conservation Desktop – Soils Map and Report



You are Here: [Home](#) / [People](#) / NRCS Employees

People

- ▣ Outreach & Advocacy
- ▣ Partners
 - Teachers and Students
 - Volunteers
- ▣ NRCS Employees
 - Special Emphasis Programs

Related Topics

SharePoint

- [SharePoint Homepage](#)
- [Field Tools](#)

NRCS Employees



CD-CART Lesson 16.5 Create Soils Map and Report & Upload to DMS

CD-CART Lesson 20.1: Export Land Units or Practices to a Shapefile

(NRCS State, Field & Technical SharePoint>Conservation Desktop>Lesson Plans)

Use Soil Survey to Identify

- Resource Concerns
- Suitability for Conservation Practices
 - Steep land
 - Soil stability
 - Soil permeability
 - Flooding or Ponding
 - Seasonal high-water table
 - Soil Depth
 - Hydric or non-hydric?



United States Department of Agriculture

Web Soil Survey – Official Soil Survey Data

The screenshot displays the Web Soil Survey web application interface. At the top, the USDA logo and "United States Department of Agriculture" are visible, along with the "Natural Resources Conservation Service" banner. The main navigation bar includes links for "Contact Us", "Subscribe", "Archived Soil Surveys", "Soil Survey Status", "Glossary", "Preferences", "Link", "Logout", and "Help". Below this, a secondary navigation bar features buttons for "Area of Interest (AOI)", "Soil Map", "Soil Data Explorer", "Download Soils Data", and "Shopping Cart (Free)".

The "Area of Interest (AOI)" section is highlighted with a red box. It contains a "Search" field, an "Area of Interest" dropdown menu, and an "Import AOI" button. Below these are "Quick Navigation" options: "Address", "State and County", and "Soil Survey Area". The "Latitude and Longitude or Current Location" section is also highlighted with a red box. It includes a "View" button with a question mark, a "Show current location" button labeled "click to get location", a text input field for "Latitude, Longitude" containing the coordinates "40.368056, -76.675556", a "Display location marker" checkbox which is checked, and a "View" button at the bottom.

The "Area of Interest Interactive Map" section is visible on the right. It features a toolbar with icons for zooming, panning, and other map functions. Below the toolbar, there are dropdown menus for "View Extent" (set to "Contiguous U.S.") and "Scale" (set to "not to scale"). The map itself shows a satellite view of a rural area with roads, fields, and a small cluster of buildings. Labels on the map include "Maraca Gap", "Service Road", "Daupe", "Small's Church Rd", and "Jonathan Rd".



Field Office Tech Guide – Section II



FIELD OFFICE TECHNICAL GUIDE

 Support

 Help

 Login

Welcome to NRCS Field Office Technical Guide (FOTG)

Section I

Section II

Climatic Data

Cultural Resources Information

Soils Information

Archived Soil Surveys

Highly Erodible Soil Lists

Hydric Soil List

LESA

Highly Erodible Soil Lists

Documents (1 - 25)

Document Title	Type	Pub Date	Subject
Adams County		2007-2-6	--
Allegheny County		2007-2-6	--
Armstrong County		2015-3-9	--
Beaver		2007-	--



FIELD OFFICE TECHNICAL GUIDE

FOTG> Section II> Soils

Create County Soil Reports

Section 2 - Natural and Cultural Resources Information

Climatic Data

Cultural Resources Information

Soils Information

Archived Soil Surveys

Highly Erodible Soil Lists

Hydric Soil List

LESA

Soil Data Download

Soils Legend



Land Classifications ? ⌵	
Conservation Tree and Shrub Suitability Groups	⌵
Forage Suitability Groups	⌵
Hydric Soil List - All Components	⌵
Hydric Soils	⌵
Land Capability Classification	⌵
NCCPI Overall	⌵
Prime and other Important Farmlands	⌵
View Description View Soil Report	

Use FOTG link to launch
Web Soil Survey
Create County Soil Reports

Prime and other Important Farmlands–Butler County, Pennsylvania		
Map Symbol	Map Unit Name	Farmland Classification
BrB	Brinkerton silt loam, 3 to 8 percent slopes	Not prime farmland
BrC	Brinkerton silt loam, 8 to 15 percent slopes	Not prime farmland
BuB	Buchanan loam, 3 to 8 percent slopes	All areas are prime farmland
BuC	Buchanan loam, 8 to 15 percent slopes	Farmland of statewide importance
BxB	Buchanan loam, 0 to 8 percent slopes, extremely stony	Not prime farmland
BxD	Buchanan loam, 8 to 25 percent slopes, extremely stony	Not prime farmland
Cd	Canadice silty clay loam	Not prime farmland
CeA	Caneadea silt loam, 0 to 3 percent slopes	Farmland of statewide importance
CeB	Caneadea silt loam, 3 to 8 percent slopes	Farmland of statewide importance
CeC	Caneadea silt loam, 8 to 15 percent slopes	Farmland of statewide importance
CeD	Caneadea silt loam, 15 to 25 percent slopes	Not prime farmland
CfB	Canfield silt loam, 3 to 8 percent slopes	All areas are prime farmland

SoilWeb – Displays official SSURGO data

< Close
SoilWeb

University of California
Agriculture and Natural Resources

Berks shaly silt loam, 3 to 8 percent slopes, moderately eroded (BkB2)

▲ Map Unit Composition

85% - [Berks](#)
Geomorphic Position: hillslopes / Summit

3% - [Bedington](#)

3% - [Ernest](#)

2% - [Blairton](#)

2% - [Weikert](#)

▼ Map Unit Data

▲ Survey Metadata

Soil Survey Area: PA043 ?

Scale: 1:16,000 ?

Published: 1967 ?

Last Export: Sep 19 2018 ?

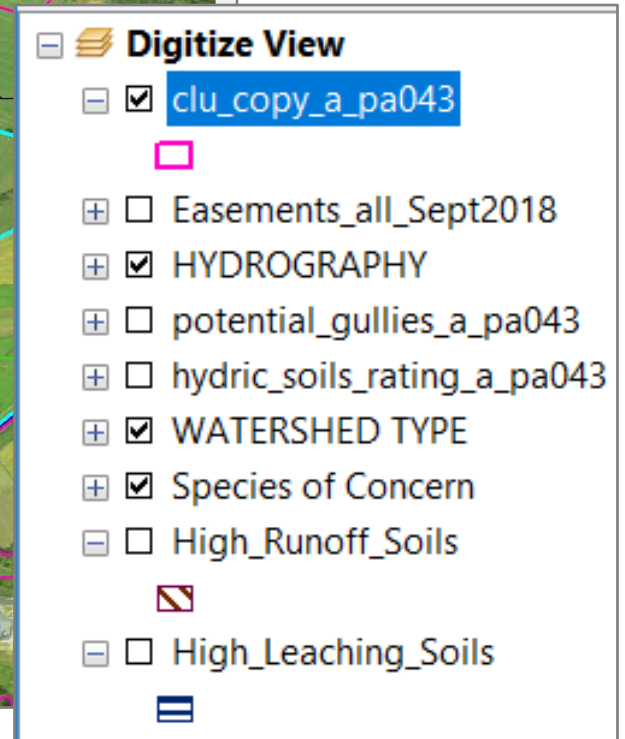
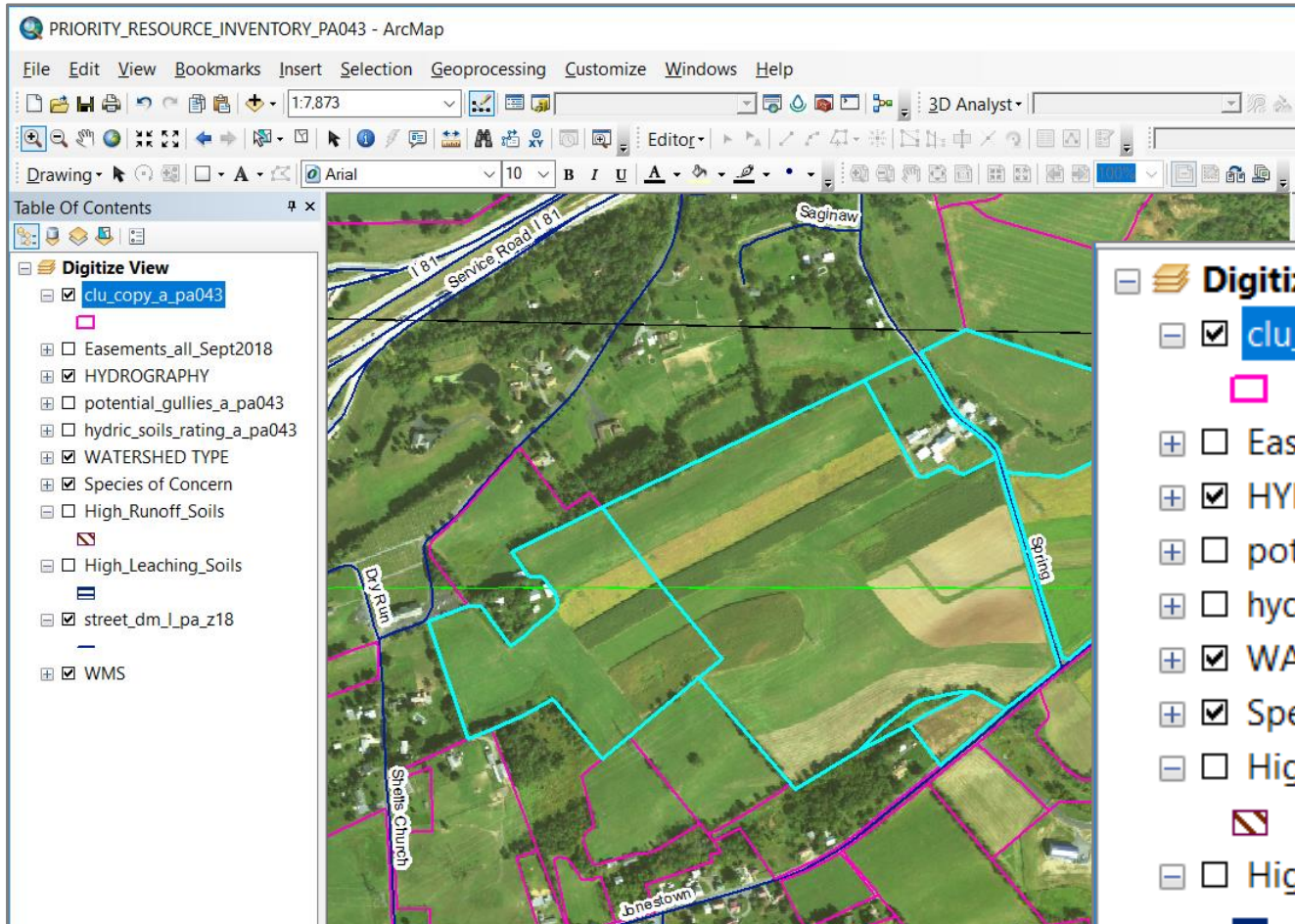
[Link to WSS](#)

+
-

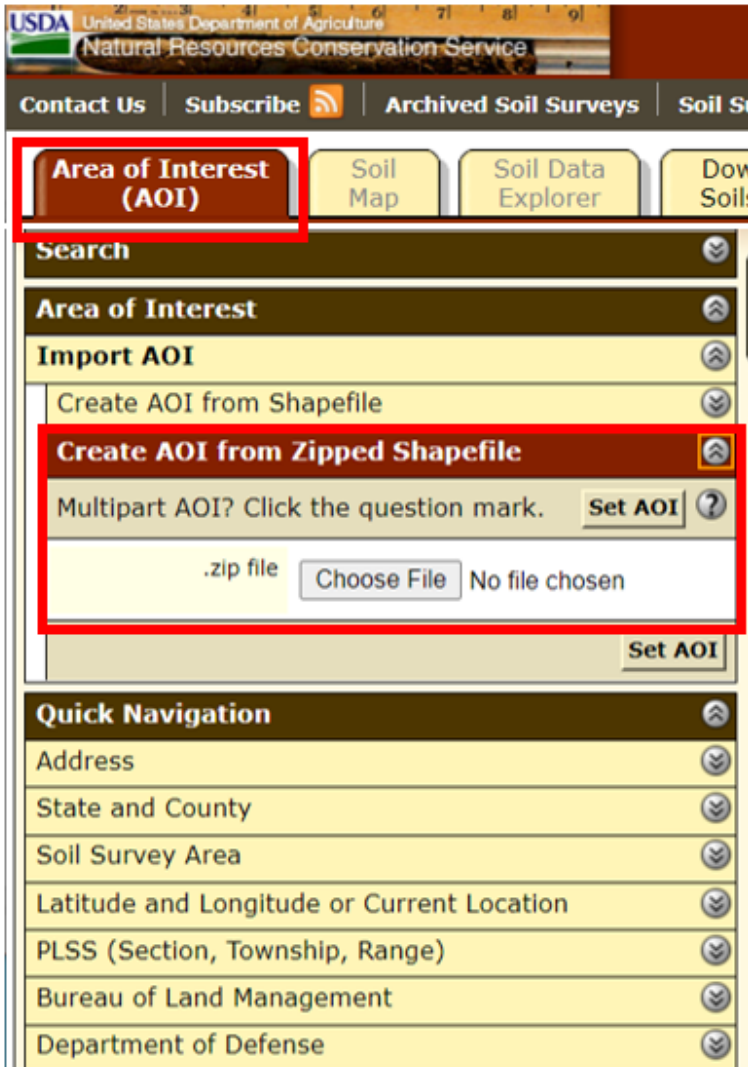
Lat: 40.3753
 Lon: -76.6629

Imagery ©2019, DigitalGlobe, PA Department of Conservation and Natural Resources-PAMAP/USGS, U.S. Geological Survey, USDA Farm Service Agency 50 m Terms of Use

Priority Resources Inventory



Web Soil Survey Tips



The screenshot shows the USDA Web Soil Survey interface. The 'Area of Interest (AOI)' section is highlighted with a red box. Within this section, the 'Create AOI from Zipped Shapefile' option is also highlighted with a red box. Below this option, there is a text input field for the file name, a 'Choose File' button, and a 'Set AOI' button. The 'Quick Navigation' section is visible at the bottom of the page.

Import a Zipped Shapefile

- Use a shapefile created in Conservation Desktop to set the Area of Interest (AOI)



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 **Dauphin County, Pennsylvania**

Gessaman Farm



February 5, 2019

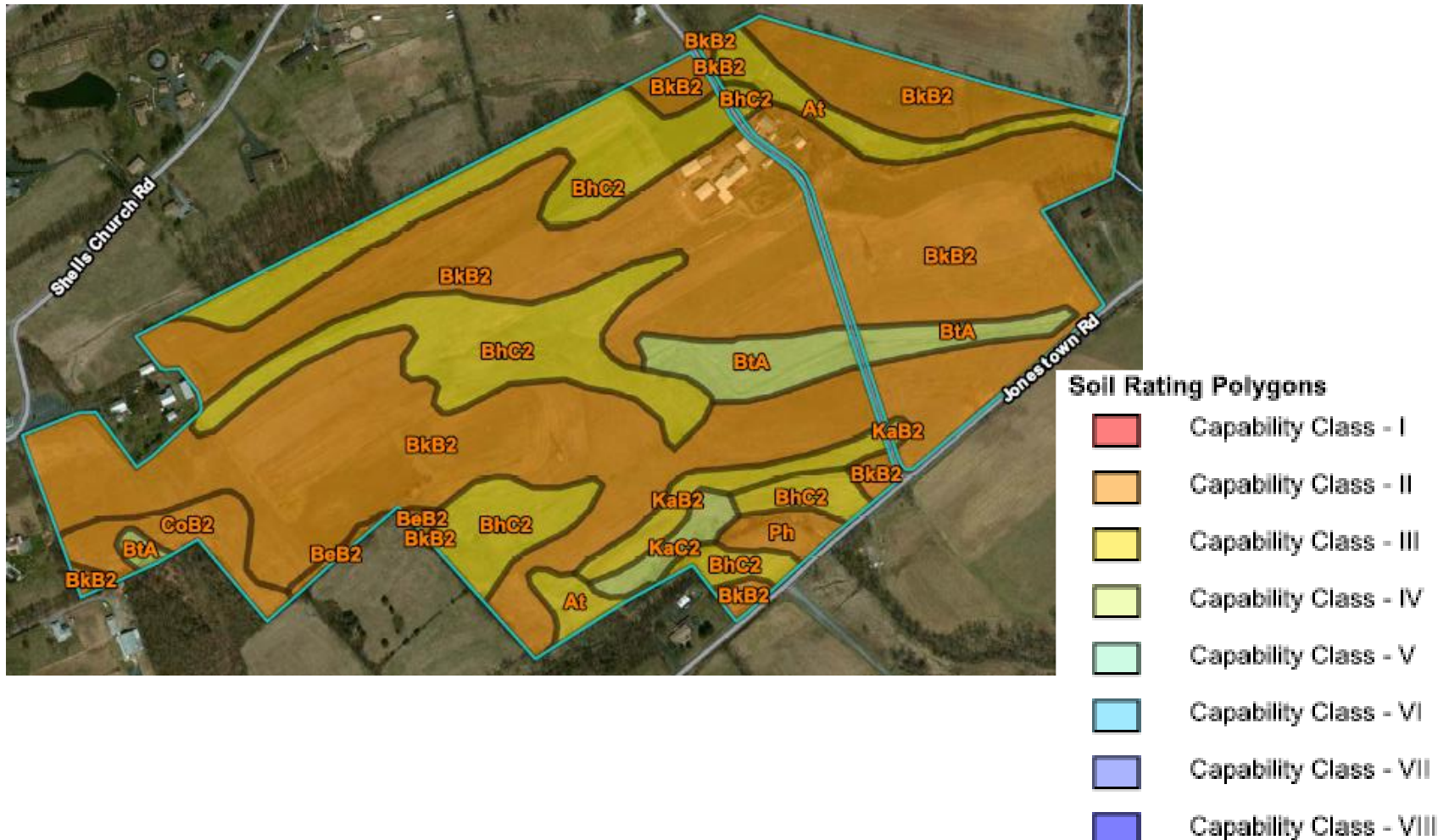
Web Soil Survey Tips

Suitability and Limitations Land Classification Group

- Farmland Classification
- Hydric Rating
- Nonirrigated Capability Class

Intro to Soils	Suitabilities and Limitations for Use	Soil Properties and Qualities
Suitabilities and Limitations Ratings		
		Open All Close
Building Site Development		
Construction Materials		
Disaster Recovery Planning		
Land Classifications		
Conservation Tree and Shrub Group		
Ecological Classification ID		
Ecological Classification Name		
★	Farmland Classification	
★	Hydric Rating by Map Unit	
Irrigated Capability Class		
Irrigated Capability Subclass		
National Commodity Crop Productivity Index		
NH Forest Soil Group		
★	Nonirrigated Capability Class	
Nonirrigated Capability Subclass		

Nonirrigated Land Capability Class



Land Capability Class

- Land capability classification shows the suitability of soils for most kinds of field crops. The soils are grouped according to their limitations, the risk of damage, and the way they respond to management.
- Capability classes are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

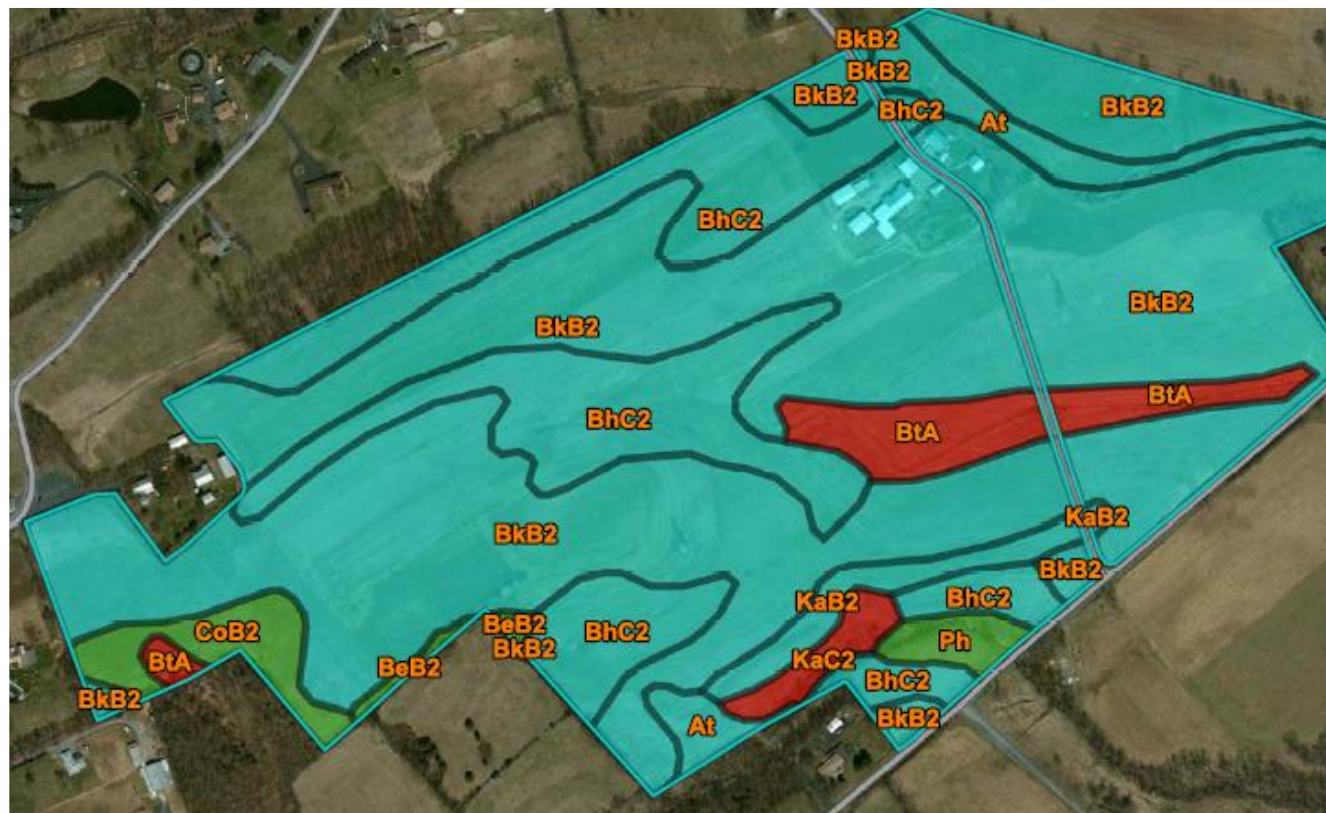


Nonirrigated Land Capability Class

Table—Nonirrigated Capability Class

Map unit symbol	Map unit name	Rating
BkB	Berks channery silt loam, 3 to 8 percent slopes	2
BkC	Berks channery silt loam, 8 to 15 percent slopes	3
BkD	Berks channery silt loam, 15 to 25 percent slopes	4
CmA	Comly silt loam, 0 to 3 percent slopes	2
Ho	Holly silt loam	3
KnD	Klinesville shaly silt loam, 15 to 25 percent slopes	6

Farmland Classification



Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Identifies the location and extent of the soils that are best suited to food, feed, fiber, forage and oilseed crops.

Farmland Classification

Table—Farmland Classification (Geesaman Farm)

Map unit symbol	Map unit name	Rating	Acres in AOI
At	Atkins silt loam	Farmland of statewide importance	3.6
BeB2	Bedington shaly silt loam, 3 to 8 percent slopes, moderately eroded	All areas are prime farmland	0.4
BhC2	Berks channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance	20.4
BkB2	Berks shaly silt loam, 3 to 8 percent slopes, moderately eroded	Farmland of statewide importance	64.4
BtA	Brinkerton and Armagh silt loams, 0 to 3 percent slopes	Not prime farmland	4.5
CoB2	Comly silt loam, 2 to 8 percent slopes, moderately eroded	All areas are prime farmland	2.6
KaB2	Klinesville shaly silt loam, 3 to 8 percent slopes, moderately eroded	Farmland of statewide importance	2.1

Hydric Soils Map



Soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Web Soil Survey Tips

Suitability and Limitations Soil Qualities and Features

- Depth to Restrictive Layer
- Drainage Class
- Hydrologic Soil Group
- Representative Slope

Intro to Soils	Suitabilities and Limitations for Use	Soil Properties and Qualities
Properties and Qualities Ratings		
		Open All
Soil Chemical Properties		
Soil Erosion Factors		
Soil Health Properties		
Soil Physical Properties		
Soil Qualities and Features		
	AASHTO Group Classification (Surface)	
	AASHTO Group Index	
★	Depth to a Selected Soil Restrictive Layer	
	Depth to Any Soil Restrictive Layer	
★	Drainage Class	
	Frost Action	
	Frost-Free Days	
★	Hydrologic Soil Group	
	Map Unit Name	
	Parent Material Name	
★	Representative Slope	

Web Soil Survey Tips

Suitability and Limitations

Soil Health Properties

- Bulk Density
- Organic Matter
- Soil Reaction (pH)
- Surface Texture

Intro to Soils	Suitabilities and Limitations for Use	Soil Properties and Qualities
Soil Chemical Properties		
Soil Erosion Factors		
Soil Health Properties		
Soil Health - Available Water Capacity		
Soil Health - Bulk Density, One-Third Bar		
Soil Health - Organic Matter		
Soil Health - Sodium Adsorption Ratio (SAR)		
Soil Health - Soil Reaction (pH)		
Soil Health - Surface Texture		
Soil Physical Properties		
Soil Qualities and Features		
Water Features		

WSS Tips

Suitability and Limitations Disaster Recovery Planning

- Composting Facility – Surface



Disaster Recovery Planning ?	
Animal Disposal by Composting (Catastrophic) (WV)	
Catastrophic Event, Large Animal Mortality, Burial	
Catastrophic Event, Large Animal Mortality, Incinerate	
Catastrophic Mortality, Large Animal Disposal, Pit	
Catastrophic Mortality, Large Animal Disposal, Trench	
Clay Liner Material Source	
Composting Facility - Subsurface	
Composting Facility - Surface	
Composting Medium and Final Cover	
Emergency Disposal by Shallow Burial	
Emergency Land Application of Milk	
Rubble and Debris Disposal, Large-Scale Event	

Suitability and Limitations Ratings

Building Site Development

- Shallow Excavations

Intro to Soils

Suitabilities and Limitations for Use

Search

Suitabilities and Limitations Ratings

Open All

Building Site Development

Corrosion of Concrete

Corrosion of Steel

Dwellings With Basements

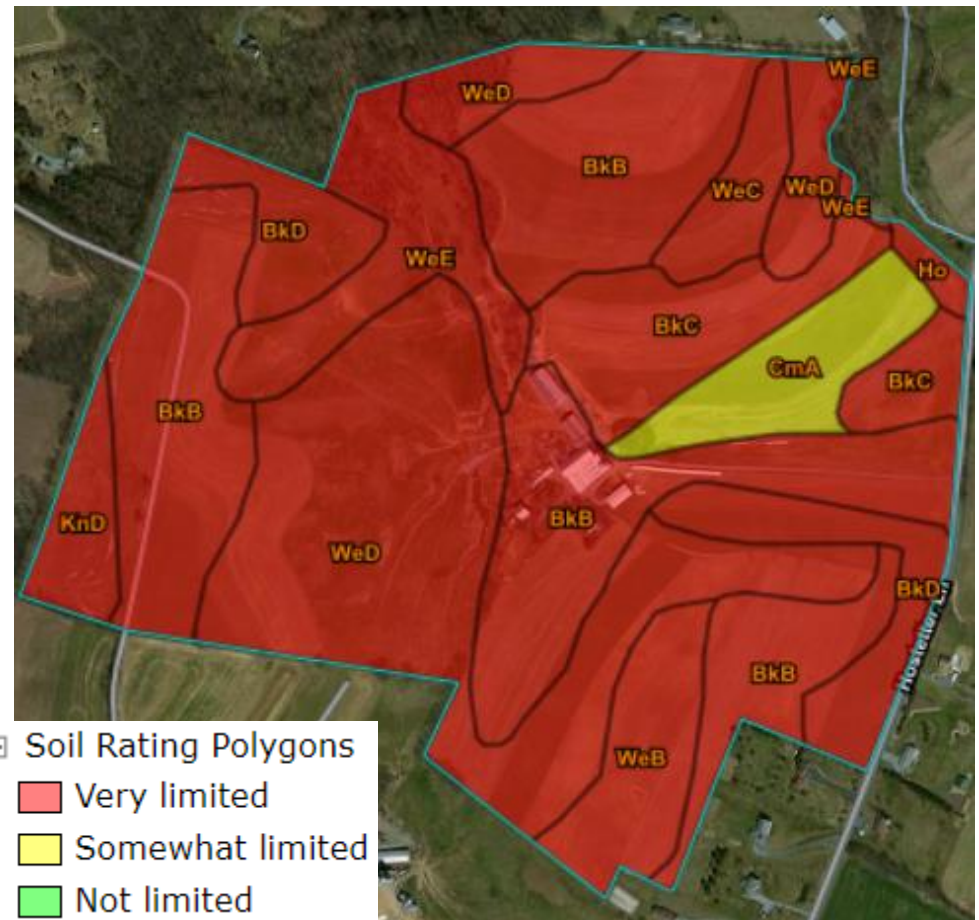
Dwellings Without Basements

Lawns, Landscaping, and Golf Fairways

Local Roads and Streets

Shallow Excavations

View Description



WSS Tips

Soil Reports

AOI Inventory

- Map Unit Description



Report — Map Unit Description

Lebanon County, Pennsylvania

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 tr

Description of Berks

Setting

*Landform: Mountain slopes, ridges
 Landform position (two-dimensional): Backslope, summ
 Landform position (three-dimensional): Upper third of n
 Down-slope shape: Convex
 Across-slope shape: Convex, linear
 Parent material: Residuum weathered from shale and si*

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 ber
 Drainage class: Well drained*

WSS Tips

Soil Reports

AOI Inventory

- Map Unit Description
(Brief, Generated)

Report — Map Unit Description (Brief, Generated)

Minor map unit components are excluded from this report.

Lebanon County, Pennsylvania

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

Component: Berks (85%)

The Berks component makes up 85 percent of the map unit. Slopes are on ridges on hills, mountain slopes on mountains. The parent material is residuum weathered from shale and siltstone and/or fine grained sandstone. The most restrictive layer, bedrock, lithic, is 20 to 40 inches. The natural drainage is to the south. Movement in the most restrictive layer is moderately low. Available water (or restricted depth) is very low. Shrink-swell potential is low. This soil is not ponded. There is no zone of water saturation within a depth of 72 inches. The surface horizon is about 3 percent. Nonirrigated land capability class is 1. This soil does not meet hydric criteria.

Component: Weikert (10%)

Generated brief soil descriptions are created for major soil component only. Minor component.

Component: Brinkerton (5%)

Generated brief soil descriptions are created for major soil component only. Minor component.

Soil Properties and Qualities

Ecological Sites

Soil Reports

Soil Reports

Open All Close All ?

AOI Inventory ?

Component Description (Nontechnical)

Component Legend

Component Text Descriptions

Descripción de la Unidad de Mapa

Descripción de la Unidad de Mapa (Breve, Generada)

Legend

Map Unit Description

Map Unit Description (Brief)

★ Map Unit Description (Brief, Generated)

Selected Soil Interpretation Description and Criteria Summary

WSS Tips - Create a Custom Report

Selected Soil Interpretations

View Description

View Soil Report

Options

Include minor soils?

☐

Select one or more soil interpretations

☐ AGR - Industrial Hemp for Fiber and Seed Production
☐ AGR - Pesticide Loss Potential-Leaching
☐ AGR - Pesticide Loss Potential-Soil Surface Runoff
☐ American Wine Grape Varieties Site Desirability (Long)
☐ AWM - Irrigation Disposal of Wastewater
☐ AWM - Land Application of Municipal Sewage Sludge
☐ AWM - Manure and Food Processing Waste
☐ AWM - Overland Flow Process

View Description

View Soil Report

Soil Reports – AOI Inventory

Selected Soil Interpretations

- AGR GRL
- AWM MIL
- DHS Septic
- ENG SOH
- FOR URP



Selected Soil Interpretations – Custom Report

Selected Soil Interpretations—Dauphin County, Pennsylvania							
Map symbol and soil name	Pct. of map unit	Eng - unpaved local roads and streets		Eng-catastrophic mortality, poultry disposal, compost (pa)		Grl - fencing, post depth =<24 inches	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BhC2—Berks channery silt loam, 8 to 15 percent slopes							
Berks	85	Somewhat limited		Severe		Limited	
		Slope	0.63	Ksat => 2.0 in/hr	1.00	>15% slope	0.63
		Frost action	0.50	Slope 3 to 15%	0.75	>25 & <50% by weight, 2mm to 3 inch fragments in 0-24 inches	0.19
		Large stones	0.10	Bedrock 24 to 40 inches	0.27	>25 & <50% by weight, 3 to 10 inch fragments in 0-24 inches	0.16
		Depth to hard bedrock	0.06			18 to 45% Clay	0.01
		Dusty	0.05				

Soil Reports

Soil Qualities and Features

Soil Features

Map symbol and soil name	Restrictive Layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
Berks	Lithic bedrock	20-36-40	10-10	Very strongly cemented	0	0	Moderate	Low	Moderate

Engineering considerations:

- Restrictive Layer
- Subsidence
- Potential for frost action
- Risk of corrosion



Soil Reports – Conservation Planning

Conservation Planning–Lebanon County, Pennsylvania										
Map symbol and soil name	Pct. of map unit	Slope RV	USLE Slope Length ft.	Runoff	T Factor	WEI	WEG	Erosion	Drainage	NIRR LCC
BkB—Berks channery silt loam, 3 to 8 percent slopes										
Berks	85	6.0	150	Medium	2	48	6	Class 1	Well drained	2e

- Slope and Slope Length
- T factor
- Kf Factor
- Drainage
- Nonirrigated Capability Class
- Hydrologic Soil Group

Soil Report – Engineering Properties

Engineering Properties—Dauphin County, Pennsylvania														
Map unit symbol and soil name	Pct. of map unit	Hydrolo gic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticit y index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			<i>In</i>				<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>	<i>L-R-H</i>
BeB2—Bedington shaly silt loam, 3 to 8 percent slopes, moderately eroded														
Bedington	85	B	0-9	Channery silt loam	CL, GM, ML, SM, GC-GM	A-2, A-4	0- 0- 0	0- 3- 5	50-68- 85	50-65- 80	40-58- 75	30-48- 65	20-28 -35	2-6 -10

- Hydrologic Soil Group
- USDA Texture
- Unified and AASHTO Classifications
- Percentage passing sieve number
- Liquid Limit
- Plasticity Index



Soil Reports – Water Features

Report—Water Features

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
At—Atkins silt loam											
Atkins	B/D	Very high	Jan-Jun	0.0-1.0	6.0	Apparent	—	—	None	Long (7 to 30 days)	Frequent
			Jul	—	—	—	—	—	None	Long (7 to 30 days)	Frequent

- Hydrologic Soil Group
- Surface Runoff
- Water table
- Ponding
- Flooding



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Map Unit Legend
Dauphin County, Pennsylvania (PA043)
Dauphin County, Pennsylvania (PA043)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
At	Atkins silt loam	3.6	3.6%
BeB2	Bedington shaly silt loam, 3 to 8 percent slopes, moderately eroded	0.4	0.4%
BhC2	Berks channery silt loam, 8 to 15 percent slopes	20.4	20.3%
BkB2	Berks shaly silt	64.4	64.0%

Printable Version Options
Report Options
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Subtitle (optional)
☐ Area of Interest Name: "T1177_Geesaman"
☒ Custom Subtitle:
Soil Stop 1
☐ None
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You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil

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