



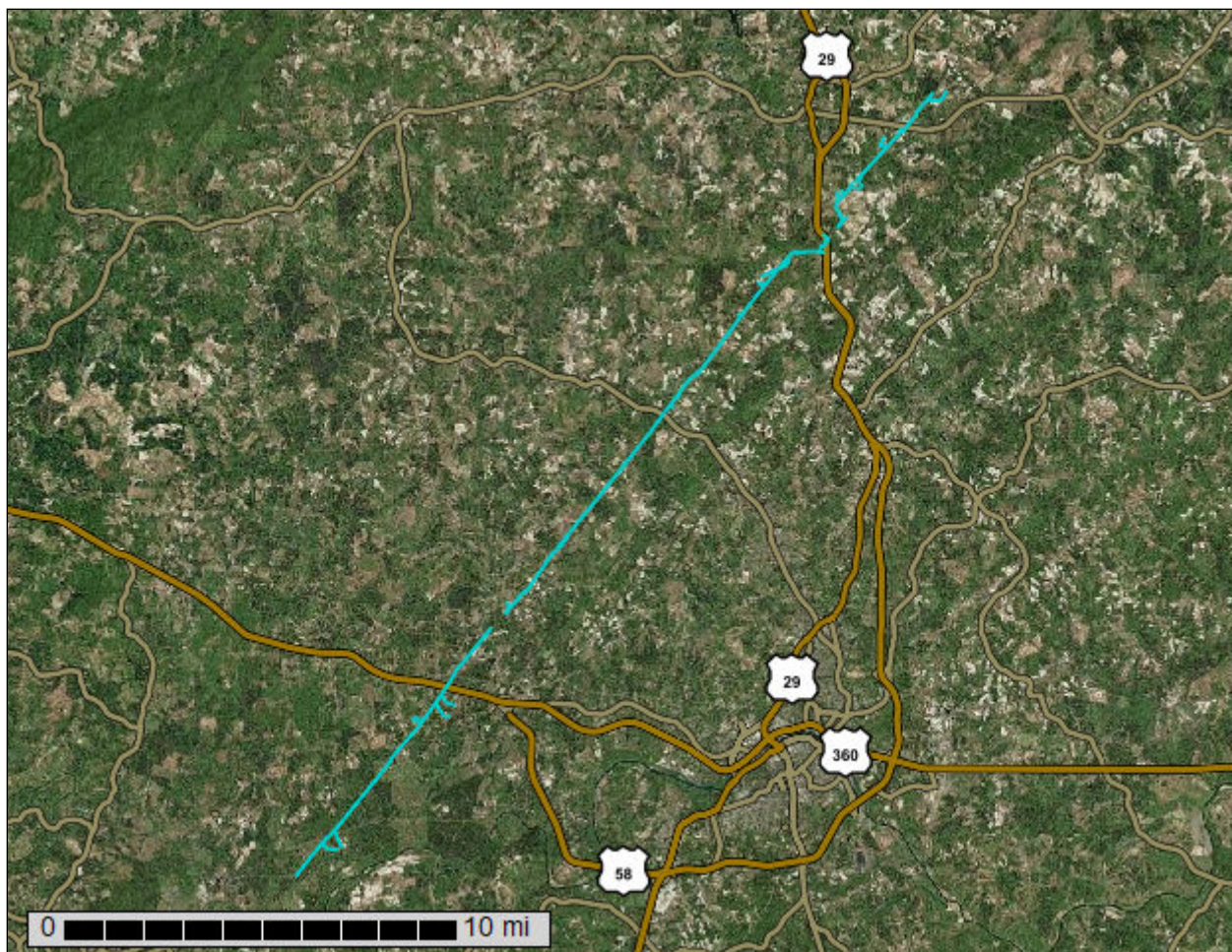
United States  
Department of  
Agriculture

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 Pittsylvania County and the City of Danville, Virginia, and Rockingham County, North Carolina



# Preface

---

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

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

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

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

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

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

# Contents

---

<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	12
Map Unit Descriptions.....	13
Pittsylvania County and the City of Danville, Virginia.....	16
1B—Nathalie sandy loam, 2 to 7 percent slopes.....	16
1C—Nathalie sandy loam, 7 to 15 percent slopes.....	17
3B—Delanco fine sandy loam, 2 to 7 percent slopes.....	18
4B—Clifford sandy loam, 2 to 7 percent slopes.....	19
4C—Clifford sandy loam, 7 to 15 percent slopes.....	20
5B3—Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded....	21
5C3—Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded...	22
7A—Codorus loam, 0 to 2 percent slopes, occasionally flooded.....	23
8A—Codorus-Comus complex, 0 to 2 percent slopes, frequently flooded..	24
9B—Lackstown fine sandy loam, 2 to 7 percent slopes.....	25
9C—Lackstown fine sandy loam, 7 to 15 percent slopes.....	27
11B3—Minnieville clay loam, 2 to 7 percent slopes, severely eroded.....	28
11C3—Minnieville clay loam, 7 to 15 percent slopes, severely eroded.....	29
17B—Yadkin loam, 2 to 7 percent slopes.....	30
18C3—Yadkin clay loam, 7 to 15 percent slopes, severely eroded.....	31
21D—Poplar Forest fine sandy loam, 15 to 25 percent slopes.....	32
21E—Poplar Forest fine sandy loam, 25 to 45 percent slopes.....	33
22B—Bentley sandy loam, 2 to 7 percent slopes.....	34
23B—Clover fine sandy loam, 2 to 7 percent slopes.....	35
23C—Clover fine sandy loam, 7 to 15 percent slopes.....	36
23D—Clover fine sandy loam, 15 to 25 percent slopes.....	37
28C—Pinkston cobbly sandy loam, 7 to 15 percent slopes.....	38
29C—Pinkston-Clover complex, 7 to 15 percent slopes, very stony.....	39
29D—Pinkston-Clover complex, 15 to 35 percent slopes, very stony.....	40
29E—Pinkston-Clover complex, 35 to 50 percent slopes, very stony.....	42
34B—Sheva fine sandy loam, 2 to 7 percent slopes.....	44
39—Udorthents, loamy, 0 to 15 percent slopes.....	45
41A—Hatboro silt loam, 0 to 2 percent slopes, frequently flooded.....	45
Rockingham County, North Carolina.....	47
CmB—Clover sandy loam, 2 to 8 percent slopes.....	47
<b>Soil Information for All Uses</b> .....	48
Soil Properties and Qualities.....	48
Soil Erosion Factors.....	48
K Factor, Rock Free.....	48
<b>References</b> .....	54

# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

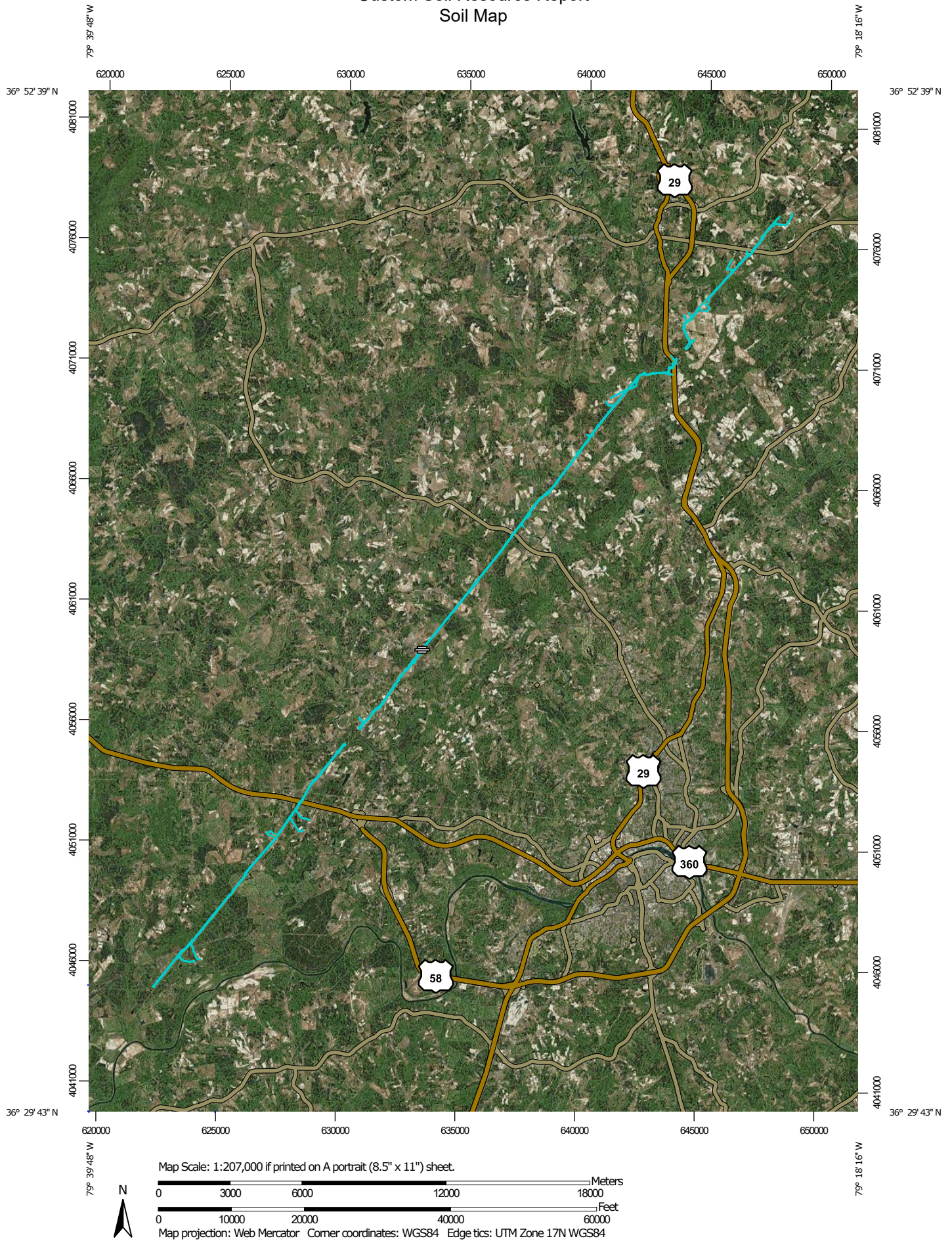
# Soil Map

---

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



# Custom Soil Resource Report Soil Map





# 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 1:24,000.

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: Pittsylvania County and the City of Danville, Virginia

Survey Area Data: Version 17, Aug 30, 2024

Soil Survey Area: Rockingham County, North Carolina

Survey Area Data: Version 26, Sep 9, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

## MAP LEGEND

## MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1B	Nathalie sandy loam, 2 to 7 percent slopes	8.0	1.7%
1C	Nathalie sandy loam, 7 to 15 percent slopes	7.4	1.6%
3B	Delanco fine sandy loam, 2 to 7 percent slopes	1.3	0.3%
4B	Clifford sandy loam, 2 to 7 percent slopes	34.2	7.3%
4C	Clifford sandy loam, 7 to 15 percent slopes	5.4	1.2%
5B3	Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded	108.0	23.1%
5C3	Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded	73.4	15.7%
7A	Codorus loam, 0 to 2 percent slopes, occasionally flooded	6.6	1.4%
8A	Codorus-Comus complex, 0 to 2 percent slopes, frequently flooded	5.3	1.1%
9B	Lackstown fine sandy loam, 2 to 7 percent slopes	7.0	1.5%
9C	Lackstown fine sandy loam, 7 to 15 percent slopes	3.2	0.7%
11B3	Minnieville clay loam, 2 to 7 percent slopes, severely eroded	8.8	1.9%
11C3	Minnieville clay loam, 7 to 15 percent slopes, severely eroded	4.5	1.0%
17B	Yadkin loam, 2 to 7 percent slopes	11.8	2.5%
18C3	Yadkin clay loam, 7 to 15 percent slopes, severely eroded	5.7	1.2%
21D	Poplar Forest fine sandy loam, 15 to 25 percent slopes	23.9	5.1%
21E	Poplar Forest fine sandy loam, 25 to 45 percent slopes	2.8	0.6%
22B	Bentley sandy loam, 2 to 7 percent slopes	2.8	0.6%
23B	Clover fine sandy loam, 2 to 7 percent slopes	60.7	12.9%
23C	Clover fine sandy loam, 7 to 15 percent slopes	57.2	12.2%

## Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
23D	Clover fine sandy loam, 15 to 25 percent slopes	7.6	1.6%
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	4.0	0.9%
29C	Pinkston-Clover complex, 7 to 15 percent slopes, very stony	5.6	1.2%
29D	Pinkston-Clover complex, 15 to 35 percent slopes, very stony	1.9	0.4%
29E	Pinkston-Clover complex, 35 to 50 percent slopes, very stony	2.3	0.5%
34B	Sheva fine sandy loam, 2 to 7 percent slopes	5.6	1.2%
39	Udorthents, loamy, 0 to 15 percent slopes	1.6	0.3%
41A	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded	1.9	0.4%
<b>Subtotals for Soil Survey Area</b>		<b>468.5</b>	<b>100.0%</b>
<b>Totals for Area of Interest</b>		<b>468.6</b>	<b>100.0%</b>

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CmB	Clover sandy loam, 2 to 8 percent slopes	0.1	0.0%
<b>Subtotals for Soil Survey Area</b>		<b>0.1</b>	<b>0.0%</b>
<b>Totals for Area of Interest</b>		<b>468.6</b>	<b>100.0%</b>

## Map Unit Descriptions

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

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

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

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

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

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

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

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

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

## Custom Soil Resource Report

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

## Pittsylvania County and the City of Danville, Virginia

### 1B—Nathalie sandy loam, 2 to 7 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2yzr7

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Nathalie and similar soils:* 85 percent

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

#### Description of Nathalie

##### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

##### Typical profile

*Ap - 0 to 7 inches:* sandy loam

*Bt - 7 to 34 inches:* clay

*BC - 34 to 65 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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 8.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No



## **1C—Nathalie sandy loam, 7 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzr8

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Nathalie and similar soils:* 85 percent

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

### **Description of Nathalie**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Ap - 0 to 7 inches:* sandy loam

*Bt - 7 to 34 inches:* clay

*BC - 34 to 65 inches:* sandy clay loam

#### **Properties and qualities**

*Slope:* 7 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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 8.8 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No

### **3B—Delanco fine sandy loam, 2 to 7 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2yzrf

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* All areas are prime farmland

#### **Map Unit Composition**

*Delanco and similar soils:* 90 percent

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

#### **Description of Delanco**

##### **Setting**

*Landform:* Stream terraces

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from igneous and metamorphic rock

##### **Typical profile**

*A - 0 to 9 inches:* fine sandy loam

*Bt - 9 to 53 inches:* clay loam

*C - 53 to 65 inches:* sandy clay loam

##### **Properties and qualities**

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 18 to 30 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* High (about 9.4 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C

*Ecological site:* F136XY160VA - Mesic temperature regime, high terraces, very rare inundation

*Hydric soil rating:* No

## **4B—Clifford sandy loam, 2 to 7 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2tqd3  
*Elevation:* 160 to 1,640 feet  
*Mean annual precipitation:* 39 to 47 inches  
*Mean annual air temperature:* 55 to 59 degrees F  
*Frost-free period:* 190 to 220 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Clifford and similar soils:* 93 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Clifford**

#### **Setting**

*Landform:* Interfluves  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Saprolite residuum weathered from granite and gneiss and/or  
saprolite residuum weathered from schist

#### **Typical profile**

*Ap - 0 to 6 inches:* sandy loam  
*Bt1 - 6 to 35 inches:* clay  
*Bt2 - 35 to 55 inches:* clay loam  
*C - 55 to 80 inches:* loam

#### **Properties and qualities**

*Slope:* 2 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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 7.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist  
*Hydric soil rating:* No

## **4C—Clifford sandy loam, 7 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzrg

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Clifford and similar soils:* 85 percent

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

### **Description of Clifford**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam

*Bt - 8 to 59 inches:* clay

*C - 59 to 65 inches:* loam

#### **Properties and qualities**

*Slope:* 7 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No

## **5B3—Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded**

### **Map Unit Setting**

*National map unit symbol:* 2yzrh

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Clifford, severely eroded, and similar soils:* 85 percent

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

### **Description of Clifford, Severely Eroded**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam

*Bt - 8 to 59 inches:* clay

*C - 59 to 65 inches:* loam

#### **Properties and qualities**

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No

## **5C3—Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded**

### **Map Unit Setting**

*National map unit symbol:* 2yzrj

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Clifford, severely eroded, and similar soils:* 85 percent

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

### **Description of Clifford, Severely Eroded**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam

*Bt - 8 to 59 inches:* clay

*C - 59 to 65 inches:* loam

#### **Properties and qualities**

*Slope:* 7 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No

## **7A—Codorus loam, 0 to 2 percent slopes, occasionally flooded**

### **Map Unit Setting**

*National map unit symbol:* 2yzrm

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Codorus, occasionally flooded, and similar soils:* 85 percent

*Minor components:* 3 percent

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

### **Description of Codorus, Occasionally Flooded**

#### **Setting**

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from igneous and metamorphic rock

#### **Typical profile**

*Ap - 0 to 6 inches:* loam

*Bw - 6 to 65 inches:* silty clay loam

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 12 to 30 inches

*Frequency of flooding:* Occasional

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* High (about 10.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* B/D

*Ecological site:* F136XY110VA - Mesic temperature regime, flood plain forest, wet

*Hydric soil rating:* No

### **Minor Components**

#### **Hatboro, frequently flooded**

*Percent of map unit:* 3 percent

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

## **8A—Codus-Comus complex, 0 to 2 percent slopes, frequently flooded**

### **Map Unit Setting**

*National map unit symbol:* 2yzrn  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Codus, frequently flooded, and similar soils:* 55 percent  
*Comus, frequently flooded, and similar soils:* 35 percent  
*Minor components:* 2 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Codus, Frequently Flooded**

#### **Setting**

*Landform:* Flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from igneous and metamorphic rock

#### **Typical profile**

*Ap - 0 to 6 inches:* loam  
*Bw - 6 to 65 inches:* silty clay loam

#### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)  
*Depth to water table:* About 12 to 30 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* High (about 10.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6w  
*Hydrologic Soil Group:* B/D  
*Ecological site:* F136XY110VA - Mesic temperature regime, flood plain forest, wet  
*Hydric soil rating:* No



**Description of Comus, Frequently Flooded**

**Setting**

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from igneous and metamorphic rock

**Typical profile**

*Ap - 0 to 8 inches:* fine sandy loam

*C - 8 to 65 inches:* fine sandy loam

**Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

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

*Depth to water table:* About 36 to 60 inches

*Frequency of flooding:* Frequent

*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):* 1

*Hydrologic Soil Group:* A

*Ecological site:* F136XY120VA - Mesic temperature regime, flood plain forest,  
moist

*Hydric soil rating:* No

**Minor Components**

**Hatboro, frequently flooded**

*Percent of map unit:* 2 percent

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

**9B—Lackstown fine sandy loam, 2 to 7 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2yzrp

*Elevation:* 400 to 1,000 feet

## Custom Soil Resource Report

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Lackstown and similar soils:* 85 percent

*Minor components:* 8 percent

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

### Description of Lackstown

#### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

#### Typical profile

*Ap - 0 to 10 inches:* fine sandy loam

*Bt - 10 to 65 inches:* sandy clay

#### Properties and qualities

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

*Depth to water table:* About 12 to 24 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* D

*Ecological site:* F136XY410NC - Triassic basin upland forest, seasonally wet

*Hydric soil rating:* No

### Minor Components

#### Wet spots

*Percent of map unit:* 5 percent

*Landform:* Depressions

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Hydric soil rating:* Yes

#### Leaksville

*Percent of map unit:* 3 percent

*Landform:* Depressions

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Concave

*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

## **9C—Lackstown fine sandy loam, 7 to 15 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzrq  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Lackstown and similar soils:* 85 percent  
*Minor components:* 5 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Lackstown**

#### **Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

#### **Typical profile**

*Ap - 0 to 10 inches:* fine sandy loam  
*Bt - 10 to 65 inches:* sandy clay

#### **Properties and qualities**

*Slope:* 7 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 12 to 24 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3e  
*Hydrologic Soil Group:* D  
*Ecological site:* F136XY410NC - Triassic basin upland forest, seasonally wet  
*Hydric soil rating:* No

## Minor Components

### Wet spots

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* Yes

## 11B3—Minnieville clay loam, 2 to 7 percent slopes, severely eroded

### Map Unit Setting

*National map unit symbol:* 2yzrs  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Minnieville, severely eroded, and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Minnieville, Severely Eroded

#### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Mixed mafic residuum weathered from igneous and metamorphic rock

#### Typical profile

*Ap - 0 to 6 inches:* loam  
*Bt - 6 to 42 inches:* clay  
*BC - 42 to 75 inches:* silty clay  
*C - 75 to 90 inches:* silt loam

#### Properties and qualities

*Slope:* 2 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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 8.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest, moist

*Hydric soil rating:* No

**11C3—Minnieville clay loam, 7 to 15 percent slopes, severely eroded**

**Map Unit Setting**

*National map unit symbol:* 2yzrt

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Minnieville, severely eroded, and similar soils:* 85 percent

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

**Description of Minnieville, Severely Eroded**

**Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Mixed mafic residuum weathered from igneous and metamorphic rock

**Typical profile**

*Ap - 0 to 6 inches:* loam

*Bt - 6 to 42 inches:* clay

*BC - 42 to 75 inches:* silty clay

*C - 75 to 90 inches:* silt loam

**Properties and qualities**

*Slope:* 7 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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 8.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

## Custom Soil Resource Report

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest, moist  
*Hydric soil rating:* No

### 17B—Yadkin loam, 2 to 7 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2yzs4  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Yadkin and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Yadkin

##### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Alluvium derived from igneous and metamorphic rock

##### Typical profile

*Ap - 0 to 6 inches:* cobbly sandy loam  
*Bt - 6 to 65 inches:* clay

##### Properties and qualities

*Slope:* 2 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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 8.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest, moist  
*Hydric soil rating:* No

## **18C3—Yadkin clay loam, 7 to 15 percent slopes, severely eroded**

### **Map Unit Setting**

*National map unit symbol:* 2yzs6

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Yadkin, severely eroded, and similar soils:* 85 percent

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

### **Description of Yadkin, Severely Eroded**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Alluvium derived from igneous and metamorphic rock

#### **Typical profile**

*Ap - 0 to 6 inches:* cobbly sandy loam

*Bt - 6 to 65 inches:* clay

#### **Properties and qualities**

*Slope:* 7 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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 8.1 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest,  
moist

*Hydric soil rating:* No

## **21D—Poplar Forest fine sandy loam, 15 to 25 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzs9

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Poplar forest and similar soils:* 85 percent

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

### **Description of Poplar Forest**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Mixed mafic residuum weathered from igneous and metamorphic rock

#### **Typical profile**

*A - 0 to 3 inches:* fine sandy loam

*Bt - 3 to 19 inches:* clay

*BC - 19 to 37 inches:* clay loam

*C - 37 to 65 inches:* loam

#### **Properties and qualities**

*Slope:* 15 to 25 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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 8.2 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest, moist

*Hydric soil rating:* No



## **21E—Poplar Forest fine sandy loam, 25 to 45 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzsb

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Poplar forest and similar soils:* 90 percent

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

### **Description of Poplar Forest**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Mixed mafic residuum weathered from igneous and metamorphic rock

#### **Typical profile**

*A - 0 to 3 inches:* fine sandy loam

*Bt - 3 to 19 inches:* clay

*BC - 19 to 37 inches:* clay loam

*C - 37 to 65 inches:* loam

#### **Properties and qualities**

*Slope:* 25 to 45 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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 8.2 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY320VA - Mesic temperature regime, acidic upland forest, moist

*Hydric soil rating:* No

## **22B—Bentley sandy loam, 2 to 7 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzsc

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Bentley and similar soils:* 85 percent

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

### **Description of Bentley**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Alluvium derived from igneous and metamorphic rock

#### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam

*Bt - 8 to 41 inches:* clay

*BC - 41 to 99 inches:* sandy clay loam

#### **Properties and qualities**

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 36 to 72 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 8.2 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* C

*Ecological site:* F136XY310VA - Mesic temperature regime, acidic upland forest, seasonally wet

*Hydric soil rating:* No

## **23B—Clover fine sandy loam, 2 to 7 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2yzsf

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Clover and similar soils:* 85 percent

*Minor components:* 3 percent

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

### **Description of Clover**

#### **Setting**

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Ap - 0 to 9 inches:* fine sandy loam

*Bt - 9 to 39 inches:* clay

*C - 39 to 65 inches:* sandy clay loam

#### **Properties and qualities**

*Slope:* 2 to 7 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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:* F136XY420NC - Triassic basin upland forest, moist

*Hydric soil rating:* No

### **Minor Components**

#### **Leaksville**

*Percent of map unit:* 3 percent

*Landform:* Depressions

*Landform position (two-dimensional):* Summit

## Custom Soil Resource Report

*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

### 23C—Clover fine sandy loam, 7 to 15 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2yzsg  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Clover and similar soils:* 85 percent  
*Minor components:* 3 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Clover

##### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from granite and gneiss

##### Typical profile

*Ap - 0 to 9 inches:* fine sandy loam  
*Bt - 9 to 39 inches:* clay  
*C - 39 to 65 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 7 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 3e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY420NC - Triassic basin upland forest, moist  
*Hydric soil rating:* No

## Minor Components

### Leaksville

*Percent of map unit:* 3 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

## 23D—Clover fine sandy loam, 15 to 25 percent slopes

### Map Unit Setting

*National map unit symbol:* 2yzsh  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Clover and similar soils:* 85 percent  
*Minor components:* 3 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Clover

#### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from granite and gneiss

#### Typical profile

*Ap - 0 to 9 inches:* fine sandy loam  
*Bt - 9 to 39 inches:* clay  
*C - 39 to 65 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 15 to 25 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY420NC - Triassic basin upland forest, moist  
*Hydric soil rating:* No

**Minor Components**

**Leaksville**

*Percent of map unit:* 3 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

**28C—Pinkston cobbly sandy loam, 7 to 15 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2yzsq  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Pinkston and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Pinkston**

**Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

**Typical profile**

*A - 0 to 8 inches:* cobbly sandy loam  
*Bw - 8 to 18 inches:* sandy loam  
*Cr - 18 to 29 inches:* bedrock  
*R - 29 to 39 inches:* bedrock

**Properties and qualities**

*Slope:* 7 to 15 percent  
*Depth to restrictive feature:* More than 80 inches; More than 80 inches  
*Drainage class:* Excessively drained

## Custom Soil Resource Report

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 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 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4s

*Hydrologic Soil Group:* D

*Ecological site:* F136XY430NC - Triassic basin upland forest, dry

*Hydric soil rating:* No

## 29C—Pinkston-Clover complex, 7 to 15 percent slopes, very stony

### Map Unit Setting

*National map unit symbol:* 2yzss

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Pinkston, very stony, and similar soils:* 50 percent

*Clover, very stony, and similar soils:* 40 percent

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

### Description of Pinkston, Very Stony

#### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

#### Typical profile

*A - 0 to 8 inches:* cobbly sandy loam

*Bw - 8 to 18 inches:* sandy loam

*Cr - 18 to 29 inches:* bedrock

*R - 29 to 39 inches:* bedrock

#### Properties and qualities

*Slope:* 7 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* More than 80 inches; More than 80 inches

*Drainage class:* Excessively drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

## Custom Soil Resource Report

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* D

*Ecological site:* F136XY430NC - Triassic basin upland forest, dry

*Hydric soil rating:* No

### Description of Clover, Very Stony

#### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### Typical profile

*Ap - 0 to 9 inches:* fine sandy loam

*Bt - 9 to 39 inches:* clay

*C - 39 to 65 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 7 to 15 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 3e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY420NC - Triassic basin upland forest, moist

*Hydric soil rating:* No

## 29D—Pinkston-Clover complex, 15 to 35 percent slopes, very stony

### Map Unit Setting

*National map unit symbol:* 2yzst

*Elevation:* 400 to 1,000 feet

*Frost-free period:* 179 to 222 days

*Farmland classification:* Not prime farmland



### Map Unit Composition

*Pinkston, very stony, and similar soils: 60 percent*

*Clover, very stony, and similar soils: 30 percent*

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

### Description of Pinkston, Very Stony

#### Setting

*Landform: Hillslopes*

*Landform position (two-dimensional): Shoulder*

*Landform position (three-dimensional): Interfluve*

*Down-slope shape: Convex*

*Across-slope shape: Convex*

*Parent material: Triassic residuum weathered from igneous and sedimentary rock*

#### Typical profile

*A - 0 to 8 inches: cobbly sandy loam*

*Bw - 8 to 18 inches: sandy loam*

*Cr - 18 to 29 inches: bedrock*

*R - 29 to 39 inches: bedrock*

#### Properties and qualities

*Slope: 15 to 35 percent*

*Surface area covered with cobbles, stones or boulders: 1.5 percent*

*Depth to restrictive feature: More than 80 inches; More than 80 inches*

*Drainage class: Excessively drained*

*Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 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 2.0 inches)*

#### Interpretive groups

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 7s*

*Hydrologic Soil Group: D*

*Ecological site: F136XY430NC - Triassic basin upland forest, dry*

*Hydric soil rating: No*

### Description of Clover, Very Stony

#### Setting

*Landform: Hillslopes*

*Landform position (two-dimensional): Summit*

*Landform position (three-dimensional): Interfluve*

*Down-slope shape: Convex*

*Across-slope shape: Convex*

*Parent material: Residuum weathered from granite and gneiss*

#### Typical profile

*Ap - 0 to 9 inches: fine sandy loam*

*Bt - 9 to 39 inches: clay*

*C - 39 to 65 inches: sandy clay loam*

#### Properties and qualities

*Slope: 15 to 35 percent*

## Custom Soil Resource Report

*Surface area covered with cobbles, stones or boulders:* 1.5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 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):* 4e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY420NC - Triassic basin upland forest, moist  
*Hydric soil rating:* No

## 29E—Pinkston-Clover complex, 35 to 50 percent slopes, very stony

### Map Unit Setting

*National map unit symbol:* 2yzsv  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Pinkston, very stony, and similar soils:* 60 percent  
*Clover, very stony, and similar soils:* 30 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pinkston, Very Stony

#### Setting

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

#### Typical profile

*A - 0 to 8 inches:* cobbly sandy loam  
*Bw - 8 to 18 inches:* sandy loam  
*Cr - 18 to 29 inches:* bedrock  
*R - 29 to 39 inches:* bedrock

#### Properties and qualities

*Slope:* 35 to 50 percent  
*Surface area covered with cobbles, stones or boulders:* 1.5 percent  
*Depth to restrictive feature:* More than 80 inches; More than 80 inches  
*Drainage class:* Excessively drained

## Custom Soil Resource Report

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 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 2.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7e

*Hydrologic Soil Group:* D

*Ecological site:* F136XY430NC - Triassic basin upland forest, dry

*Hydric soil rating:* No

### Description of Clover, Very Stony

#### Setting

*Landform:* Hillslopes

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Residuum weathered from granite and gneiss

#### Typical profile

*Ap - 0 to 9 inches:* fine sandy loam

*Bt - 9 to 39 inches:* clay

*C - 39 to 65 inches:* sandy clay loam

#### Properties and qualities

*Slope:* 35 to 50 percent

*Surface area covered with cobbles, stones or boulders:* 1.5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 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):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* F136XY420NC - Triassic basin upland forest, moist

*Hydric soil rating:* No

### **34B—Sheva fine sandy loam, 2 to 7 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 2yzt0  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Sheva and similar soils:* 85 percent  
*Minor components:* 4 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Sheva**

##### **Setting**

*Landform:* Hillslopes  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Triassic residuum weathered from igneous and sedimentary rock

##### **Typical profile**

*Ap - 0 to 10 inches:* fine sandy loam  
*Bt - 10 to 29 inches:* clay loam  
*Cr - 29 to 56 inches:* bedrock  
*R - 56 to 66 inches:* bedrock

##### **Properties and qualities**

*Slope:* 2 to 7 percent  
*Depth to restrictive feature:* More than 80 inches; More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* About 18 to 24 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 4.1 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F136XY420NC - Triassic basin upland forest, moist  
*Hydric soil rating:* No

**Minor Components**

**Leaksville**

*Percent of map unit:* 4 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

**39—Udorthents, loamy, 0 to 15 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 2yztj  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Udorthents, loamy, and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Udorthents, Loamy**

**Properties and qualities**

*Slope:* 0 to 15 percent  
*Depth to restrictive feature:* More than 80 inches  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None

**41A—Hatboro silt loam, 0 to 2 percent slopes, frequently flooded**

**Map Unit Setting**

*National map unit symbol:* 2yztg  
*Elevation:* 400 to 1,000 feet  
*Frost-free period:* 179 to 222 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Hatboro, frequently flooded, and similar soils:* 85 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## **Description of Hatboro, Frequently Flooded**

### **Setting**

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from igneous and metamorphic rock

### **Typical profile**

*A - 0 to 6 inches:* silt loam

*Bg - 6 to 31 inches:* loam

*Cg - 31 to 66 inches:* silt loam

### **Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* About 0 to 12 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* Rare

*Available water supply, 0 to 60 inches:* Moderate (about 8.6 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6w

*Hydrologic Soil Group:* B/D

*Ecological site:* F136XY100VA - Mesic temperature regime, flood plain forest,  
very wet

*Hydric soil rating:* Yes

## Rockingham County, North Carolina

### CmB—Clover sandy loam, 2 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2l6xv  
*Elevation:* 700 to 2,000 feet  
*Mean annual precipitation:* 40 to 48 inches  
*Mean annual air temperature:* 50 to 59 degrees F  
*Frost-free period:* 160 to 200 days  
*Farmland classification:* All areas are prime farmland

#### Map Unit Composition

*Clover and similar soils:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Clover

##### Setting

*Landform:* Interfluves  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Parent material:* Residuum weathered from mudstone and/or residuum weathered from shale and siltstone and/or residuum weathered from sandstone

##### Typical profile

*Ap - 0 to 7 inches:* sandy loam  
*Bt - 7 to 50 inches:* clay  
*C - 50 to 80 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 2 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 (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Sodium adsorption ratio, maximum:* 7.0  
*Available water supply, 0 to 60 inches:* High (about 9.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Ecological site:* F136XY420NC - Triassic basin upland forest, moist  
*Hydric soil rating:* No

# **Soil Information for All Uses**

---

## **Soil Properties and Qualities**

The Soil Properties and Qualities section includes various soil properties and qualities 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 property or quality.

## **Soil Erosion Factors**

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

### **K Factor, Rock Free**

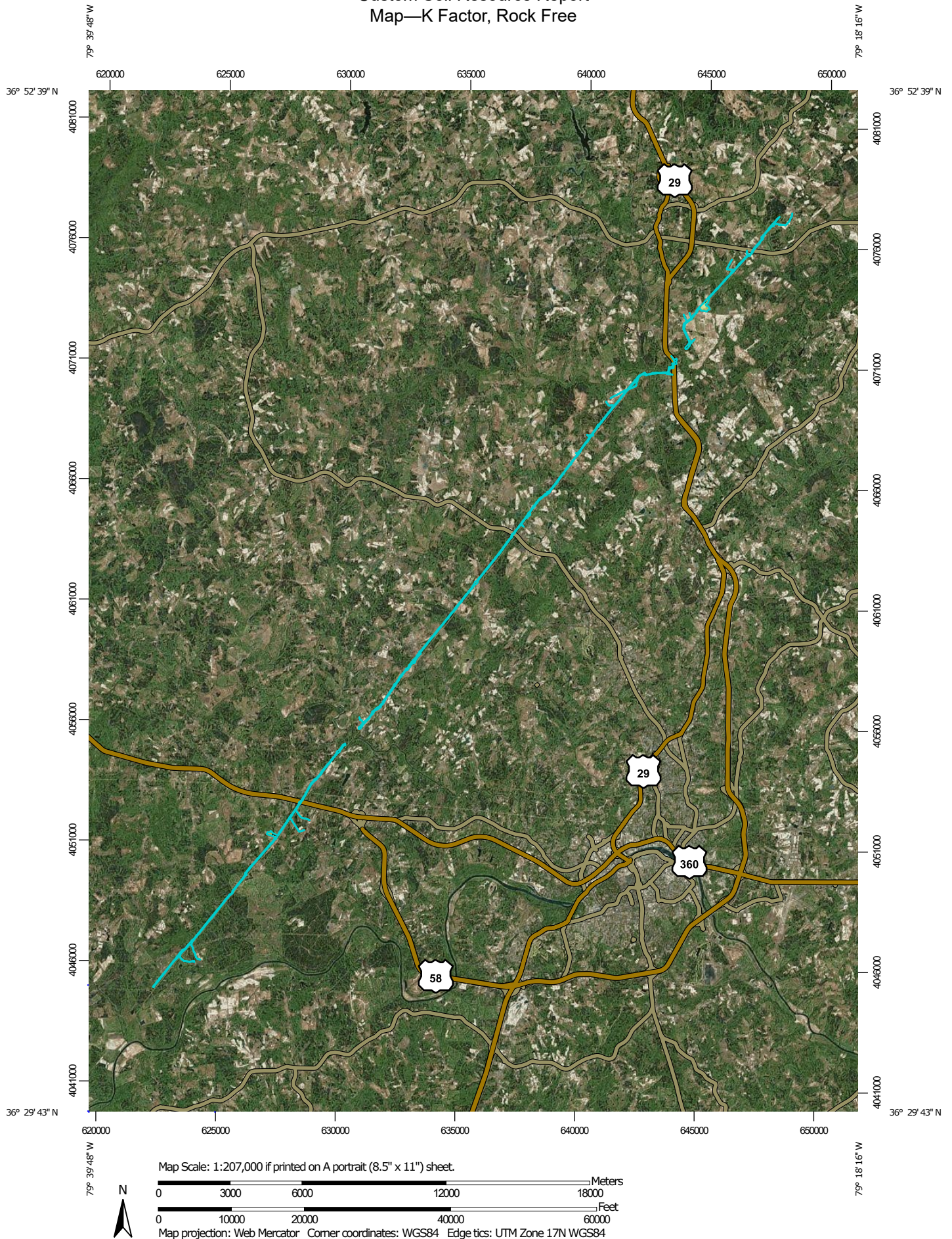
Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kf (rock free)" indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Factor K does not apply to organic horizons and is not reported for those layers.



# Custom Soil Resource Report Map—K Factor, Rock Free






## Custom Soil Resource Report
















### MAP LEGEND

#### Area of Interest (AOI)







 Area of Interest (AOI)










#### Soils

##### Soil Rating Polygons
















	.02
	.05
	.10
	.15
	.17
	.20
	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

##### Soil Rating Lines








	.02
	.05
	.10
	.15
	.17
	.20

	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

##### Soil Rating Points

	.02
	.05
	.10
	.15
	.17
	.20
	.24
	.28
	.32
	.37
	.43
	.49
	.55
	.64
	Not rated or not available

#### Water Features

	Streams and Canals
	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads
	Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Pittsylvania County and the City of Danville, Virginia  
Survey Area Data: Version 17, Aug 30, 2024

Soil Survey Area: Rockingham County, North Carolina  
Survey Area Data: Version 26, Sep 9, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Jan 1, 1999—Dec 31, 2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

## MAP LEGEND

## MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

**Table—K Factor, Rock Free**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1B	Nathalie sandy loam, 2 to 7 percent slopes	.24	8.0	1.7%
1C	Nathalie sandy loam, 7 to 15 percent slopes	.24	7.4	1.6%
3B	Delanco fine sandy loam, 2 to 7 percent slopes	.28	1.3	0.3%
4B	Clifford sandy loam, 2 to 7 percent slopes	.20	34.2	7.3%
4C	Clifford sandy loam, 7 to 15 percent slopes	.24	5.4	1.2%
5B3	Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded	.24	108.0	23.1%
5C3	Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded	.24	73.4	15.7%
7A	Codorus loam, 0 to 2 percent slopes, occasionally flooded	.49	6.6	1.4%
8A	Codorus-Comus complex, 0 to 2 percent slopes, frequently flooded	.49	5.3	1.1%
9B	Lackstown fine sandy loam, 2 to 7 percent slopes	.37	7.0	1.5%
9C	Lackstown fine sandy loam, 7 to 15 percent slopes	.37	3.2	0.7%
11B3	Minnieville clay loam, 2 to 7 percent slopes, severely eroded	.37	8.8	1.9%
11C3	Minnieville clay loam, 7 to 15 percent slopes, severely eroded	.37	4.5	1.0%
17B	Yadkin loam, 2 to 7 percent slopes	.24	11.8	2.5%
18C3	Yadkin clay loam, 7 to 15 percent slopes, severely eroded	.24	5.7	1.2%
21D	Poplar Forest fine sandy loam, 15 to 25 percent slopes	.28	23.9	5.1%
21E	Poplar Forest fine sandy loam, 25 to 45 percent slopes	.28	2.8	0.6%
22B	Bentley sandy loam, 2 to 7 percent slopes	.32	2.8	0.6%

## Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
23B	Clover fine sandy loam, 2 to 7 percent slopes	.28	60.7	12.9%
23C	Clover fine sandy loam, 7 to 15 percent slopes	.28	57.2	12.2%
23D	Clover fine sandy loam, 15 to 25 percent slopes	.28	7.6	1.6%
28C	Pinkston cobbly sandy loam, 7 to 15 percent slopes	.32	4.0	0.9%
29C	Pinkston-Clover complex, 7 to 15 percent slopes, very stony	.32	5.6	1.2%
29D	Pinkston-Clover complex, 15 to 35 percent slopes, very stony	.32	1.9	0.4%
29E	Pinkston-Clover complex, 35 to 50 percent slopes, very stony	.32	2.3	0.5%
34B	Sheva fine sandy loam, 2 to 7 percent slopes	.32	5.6	1.2%
39	Udorthents, loamy, 0 to 15 percent slopes		1.6	0.3%
41A	Hatboro silt loam, 0 to 2 percent slopes, frequently flooded	.37	1.9	0.4%
<b>Subtotals for Soil Survey Area</b>			<b>468.5</b>	<b>100.0%</b>
<b>Totals for Area of Interest</b>			<b>468.6</b>	<b>100.0%</b>

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CmB	Clover sandy loam, 2 to 8 percent slopes	.17	0.1	0.0%
<b>Subtotals for Soil Survey Area</b>			<b>0.1</b>	<b>0.0%</b>
<b>Totals for Area of Interest</b>			<b>468.6</b>	<b>100.0%</b>

### Rating Options—K Factor, Rock Free

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

*Layer Options (Horizon Aggregation Method):* Surface Layer (Not applicable)

# References

---

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_054262](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262)
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053577](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577)
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053580](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580)
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)