Forest Management Plan for the Baker Creek Property

Lancaster County, South Carolina

August 27, 2024

Tax Parcel(s) and Acreage(s): 0090-00-019.01 (107.9 acres); 0090-00-041.00 (242.0 acres)

Primary Management Goal: To produce periodic timber income at a sustainable yield.

Secondary Management Goals: To improve forest health, enhance game habitat, and protect water quality.

Location: 34.67946, -80.60942

Prepared by: Tim Cartner, RF; 704.996.0380; tim@landncsc.com

Area 1 (± 102 acres)

Dominant Timber Species: Loblolly Pine

Minor Timber Species: maple, gum, cedar

Origin: Planted

Establishment Date: ~2025 (to be planted winter 2025)

Merchantable Trees Per Acre: to be planted on a 10'x10' spacing (±435 trees per acre)

Description: The area was clearcut harvested in the spring/early summer of 2024.

Recommended Management and Harvest Activity Dates: Herbicide application in late summer/early fall to kill/suppress competitive vegetation. Plant winter 2025 with improved loblolly pine at a rate of ±435 trees per acre.

Area 2 (± 123 acres)

Dominant Timber Species: Loblolly pine

Minor Timber Species: gum, maple, poplar, cedar, oak

Origin: planted

Establishment Date: ~2000

Merchantable DBH Range: 6" to 16"

Merchantable Average DBH: 10.3"

Merchantable Trees Per Acre: ±223

Basal Area (ft^2/acre): ±130

Description: Planted loblolly pine (~2000). The stand was thinned in 2017. Stand density has reached a level where another thinning harvest is recommended.

Forest Products Present: pine pulpwood, pine chip-n-saw, pine sawtimber, hardwood pulpwood

Recommended Management and Harvest Activity Dates: Thin (by the end of 2026) by harvesting inferior quality trees until the stand density has reached a basal area of 90ft^2/ac to 100ft^2/ac. When thinning, harvest trees along roadsides (approximately15 feet on both sides). "Daylighting" roads will improve drying time and create edge habitat for wildlife.

Area 3 (± 92 acres)

Dominant Timber Species: loblolly pine

Minor Timber Species: maple, oak, gum, cedar

Origin: Natural

Establishment Date: ~2003

Merchantable DBH Range: 6" to 12"

Merchantable Average DBH: 7.7"

Merchantable Trees Per Acre: ±564

Basal Area (ft^2/acre): ±180

Description: This stand is comprised primarily of naturally regenerated loblolly pine. The stand density is very high. Thinning will improve stand health, wildlife habitat, and future timber value.

Forest Products Present: pine pulpwood, pine chip-n-saw, hardwood pulpwood

Recommended Management and Harvest Activity Dates: Thin (by the end of 2026) by harvesting inferior quality trees until the stand density has reached a basal area of 80ft^2/ac to 90ft^2/ac. When thinning, harvest trees along roadsides (approximately15 feet on both sides). "Daylighting" roads will improve drying time and create edge habitat for wildlife.

Area 4 (± 24 acres) – Stream Management Zone

Dominant Timber Species: gum, maple, ash, poplar, red oak, white oak

Minor Timber Species: loblolly, cedar, cherry, walnut, shortleaf pine, hickory

Origin: Natural

Establishment Date: ~1970

Merchantable DBH Range: 6" to 20"

Merchantable Average DBH: 10.5"

Merchantable Trees Per Acre: ±200

Basal Area (ft^2/acre): ±110

Description: This stand is comprised primarily of mixed hardwood species that line the streams and drains. Most of this area lies either within the floodplains or steep, highly erodible hillsides.

Forest Products Present: pine pulpwood, pine sawtimber, hardwood pulpwood, hardwood sawtimber.

Recommended Management and Harvest Activity Dates: Allow to continue to grow. When harvesting occurs in adjacent management areas, consider selectively harvesting pine trees from the outer edges of this zone.

Area 5 (± 9 acres)

Description: Woods roads and log decks

Management Timeline Summary to 2040

Present to end 2026:

- Site prepare and plant Area 1
- Thin Areas 2 and 3

2032-34:

- Final harvest of Area 2
- 2nd thinning harvest of Area 3

2040:

- 1st thinning harvest of Area 1
- Final harvest of Area 3

Plan Prepared on August 27, 2024 by:

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NC Registered Forester #1114
SC Registered Forester #1488

Attachments:

- Stand maps (with 10' elevation contours)
- 2022 aerial map
- August 2024 Satellite Image
- Soil report

STAND TYPE MAP WITH 10’ ELEVATION LINES

Mercator Projection
WGS84
UTM Zone 17S

CALTOPO

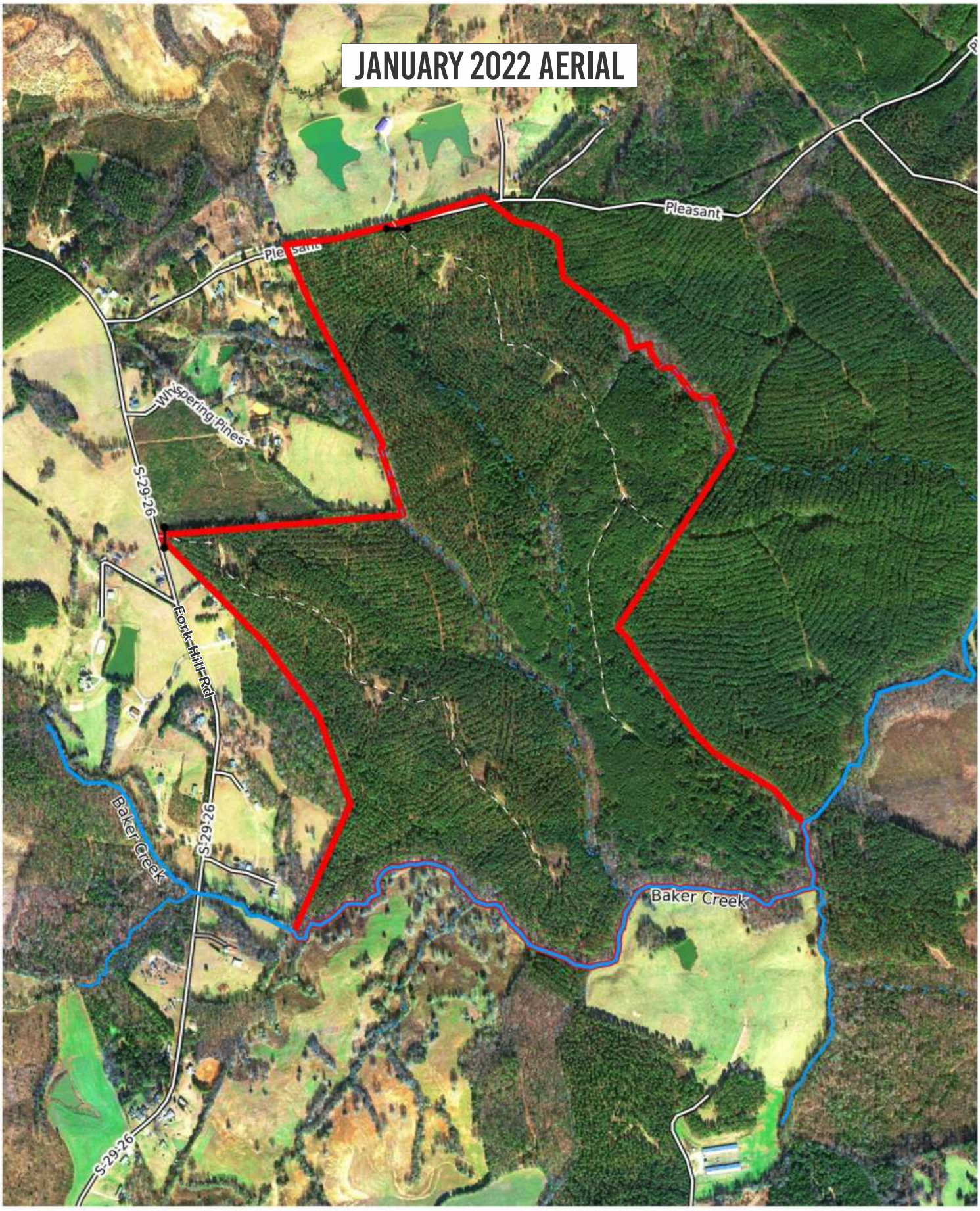
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 km

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 mi

Scale **1:12000** 1 inch = 1000 feet

CAROLINA TIMBERLAND SALES

MN -8.1º



Mercator Projection
WGS84
UTM Zone 17S
CALTOPO

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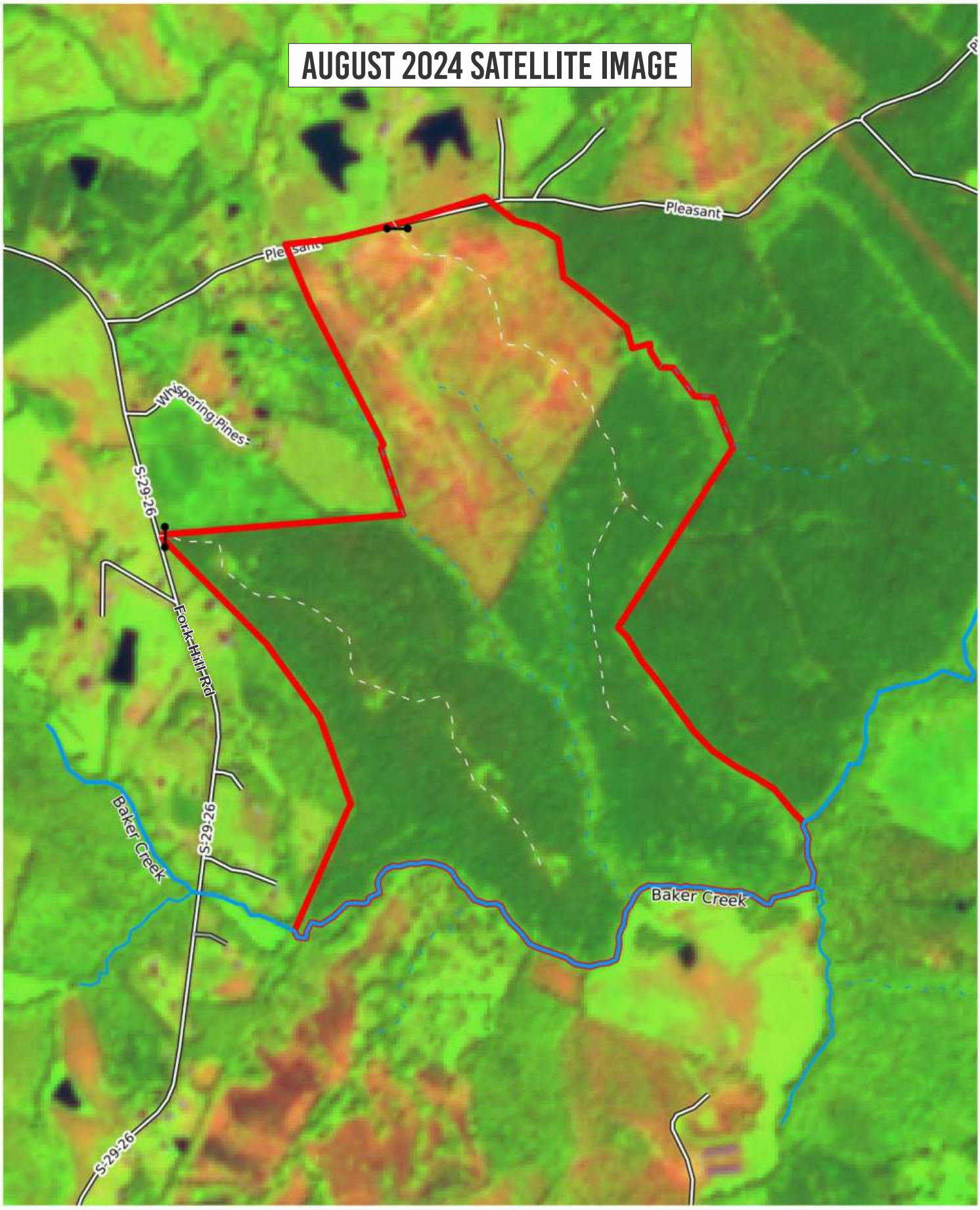
Scale **1:12000** 1 inch = 1000 feet

MN
-8.1º



Mercator Projection
WGS84
UTM Zone 17S
CALTOPO

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 k
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 mi
Scale **1:12000** 1 inch = 1000 feet

MN
-8.1º

United States Department of Agriculture

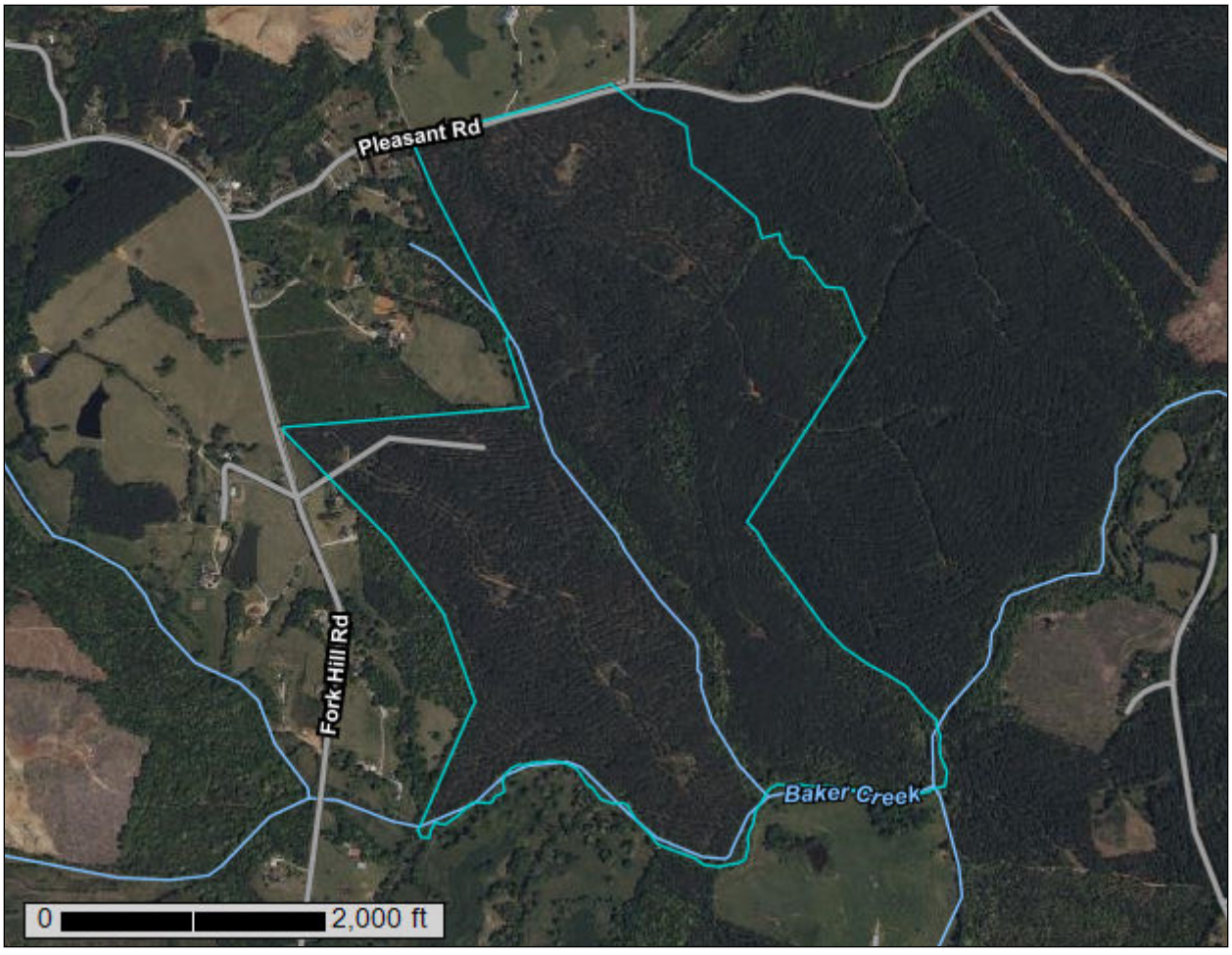
NRCS

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 Lancaster County, South Carolina

Baker Creek Tract



August 27, 2024

Preface

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

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

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

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

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

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

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Contents

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.

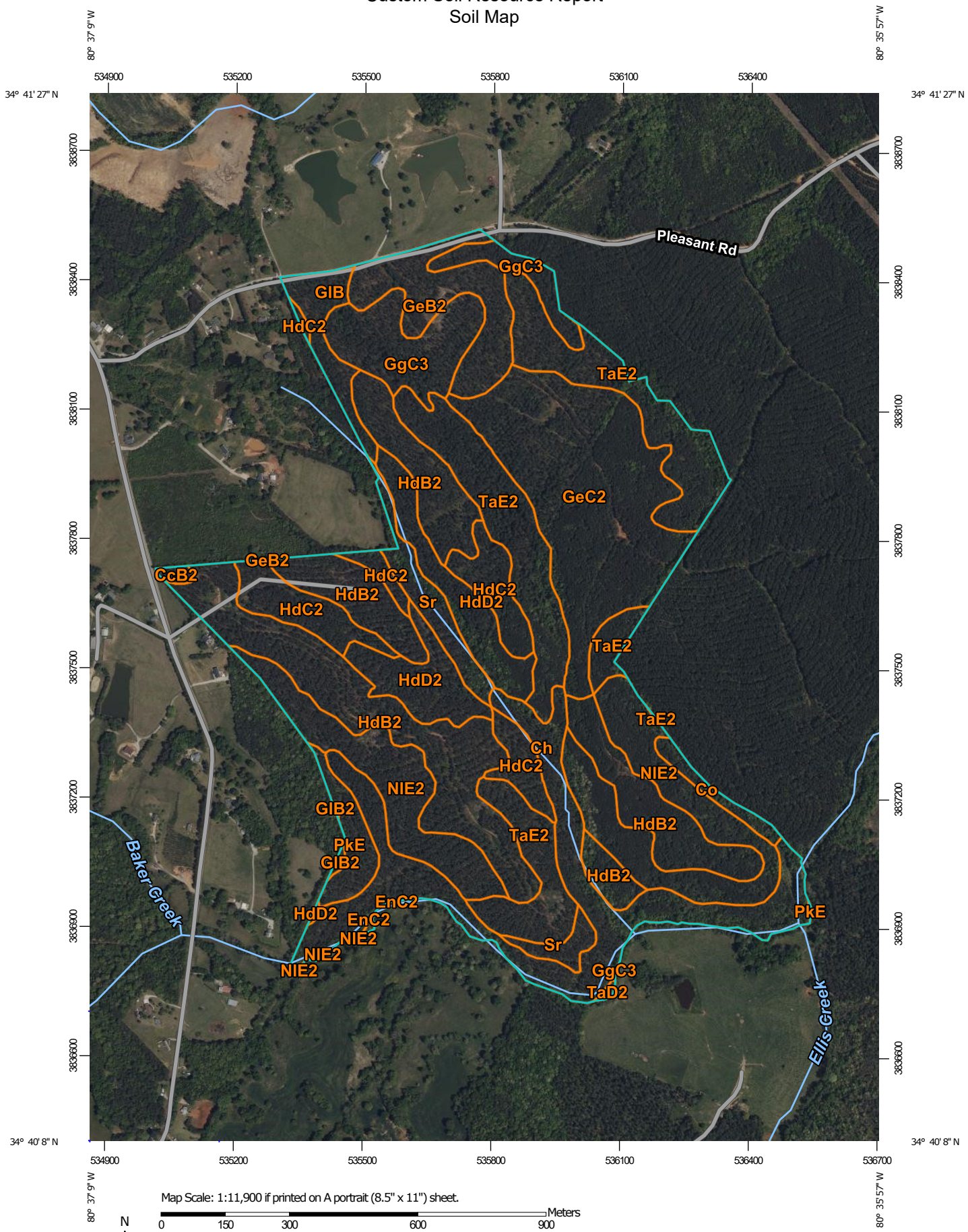
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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

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.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34° 41' 27" N
34° 40' 8" N
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536700
Pleasant Rd
GgC3
GIB
GeB2
HdC2
GgC3
TaE2
HdB2
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GeC2
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CcB2
HdC2
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TaD2
Ellis Creek
Map Scale: 1:11,900 if printed on A portrait (8.5" x 11") sheet.
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Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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: Lancaster County, South Carolina
Survey Area Data: Version 25, Aug 29, 2023

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

Date(s) aerial images were photographed: Apr 15, 2022—May 10, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CcB2	Cecil fine sandy loam, 2 to 6 percent slopes, eroded	0.7	0.2%
Ch	Chewacla soils	37.6	10.8%
Co	Congaree soils	2.7	0.8%
EnC2	Enon loam, 6 to 10 percent slopes, eroded	0.1	0.0%
GeB2	Georgeville silt loam, 2 to 6 percent slopes, moderately eroded	15.6	4.5%
GeC2	Georgeville silt loam, 6 to 10 percent slopes, eroded	47.7	13.8%
GgC3	Georgeville silty clay loam, 6 to 10 percent slopes, severely eroded	19.3	5.6%
GlB	Gills silt loam, 2 to 6 percent slopes	6.6	1.9%
GlB2	Gills silt loam, 2 to 6 percent slopes, eroded	0.3	0.1%
HdB2	Herndon silt loam, 2 to 6 percent slopes, eroded	67.4	19.5%
HdC2	Herndon silt loam, 6 to 10 percent slopes, eroded	20.1	5.8%
HdD2	Herndon silt loam, 10 to 15 percent slopes, eroded	20.4	5.9%
NlE2	Nanford loam, 15 to 25 percent slopes, moderately eroded	40.8	11.8%
PkE	Pickens slaty silt loam, 10 to 25 percent slopes	5.5	1.6%
Sr	Starr soils	9.3	2.7%
TaD2	Tarrus loam, 10 to 15 percent slopes, moderately eroded	0.2	0.1%
TaE2	Tarrus loam, 15 to 25 percent slopes, moderately eroded	52.1	15.0%
Totals for Area of Interest		**346.3**	**100.0%**

Map Unit Descriptions

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named

according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the 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.

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

Lancaster County, South Carolina

CcB2—Cecil fine sandy loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4cjw
Elevation: 200 to 1,400 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Cecil

Setting

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

Typical profile

Ap - 0 to 5 inches: fine sandy loam
BE - 5 to 7 inches: sandy loam
Bt1 - 7 to 26 inches: clay loam
Bt2 - 26 to 44 inches: clay
BC - 44 to 58 inches: clay loam
C - 58 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
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 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

Ch—Chewacla soils

Map Unit Setting

National map unit symbol: 4ck3
Elevation: 230 to 670 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Chewacla and similar soils: 90 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chewacla

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

A - 0 to 7 inches: silt loam
Bw - 7 to 38 inches: silt loam
Bg - 38 to 50 inches: silty clay loam
Cg - 50 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
Runoff class: Very high
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 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F136XY610GA - Flood plain forest, wet
Hydric soil rating: No

Minor Components

Wehadkee

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

Co—Congaree soils

Map Unit Setting

National map unit symbol: 4ck5
Elevation: 100 to 500 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

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

Description of Congaree

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium

Typical profile

Ap - 0 to 6 inches: fine sandy loam
Cw2 - 6 to 30 inches: silt loam
2Bb - 30 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
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 30 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: F136XY620GA - Flood plain forest, moist
Hydric soil rating: No

EnC2—Enon loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4ckf
Elevation: 360 to 710 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Enon

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from granite and gneiss intruded by diorite or gabbro

Typical profile

Ap - 0 to 4 inches: loam
Bt - 4 to 24 inches: clay
C - 24 to 35 inches: fine sandy loam

Properties and qualities

Slope: 6 to 10 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
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B
Ecological site: F136XY720NC - Basic upland forest, moist
Hydric soil rating: No

GeB2—Georgeville silt loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2wb8r
Elevation: 320 to 840 feet
Mean annual precipitation: 40 to 69 inches
Mean annual air temperature: 50 to 66 degrees F
Frost-free period: 180 to 280 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Georgeville, moderately eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgeville, Moderately Eroded

Setting

Landform: Ridges, interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from metavolcanics and/or residuum weathered from metasedimentary rock and/or residuum weathered from slate

Typical profile

A - 0 to 8 inches: silt loam
Bt - 8 to 32 inches: silty clay
BCt - 32 to 51 inches: silt loam
C - 51 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F136XY820GA - Acidic upland forest, moist

Hydric soil rating: No

Minor Components

Tarrus, moderately eroded

Percent of map unit: 5 percent
Landform: Ridges, interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Badin, moderately eroded

Percent of map unit: 5 percent
Landform: Ridges, interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

GeC2—Georgeville silt loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4ckn
Elevation: 300 to 1,100 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Georgeville

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile

A - 0 to 4 inches: silt loam
E - 4 to 7 inches: silt loam
Bt - 7 to 31 inches: silty clay
BC - 31 to 50 inches: silt loam

C - 50 to 63 inches: silt loam

Properties and qualities

Slope: 6 to 10 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
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GgC3—Georgeville silty clay loam, 6 to 10 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 4ckq
Elevation: 300 to 1,100 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

Georgeville, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Georgeville, 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: Clayey residuum weathered from argillite or serecite schist

Typical profile

A - 0 to 6 inches: silty clay loam
Bt - 6 to 31 inches: silty clay
BC - 31 to 50 inches: silt loam
C - 50 to 63 inches: silt loam

Properties and qualities

Slope: 6 to 10 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
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GIB—Gills silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 4ckr
Elevation: 340 to 690 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Gills

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile

A - 0 to 12 inches: silt loam
BA - 12 to 15 inches: silty clay loam
Bt2 - 15 to 31 inches: clay
Bx - 31 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to fragipan

Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

GIB2—Gills silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting
National map unit symbol: 4cks
Elevation: 380 to 690 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition
Gills and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gills

Setting
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile
A - 0 to 12 inches: silt loam
BA - 12 to 15 inches: silty clay loam
Bt2 - 15 to 31 inches: clay
Bx - 31 to 60 inches: silt loam

Properties and qualities
Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to fragipan
Drainage class: Somewhat poorly drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

HdB2—Herndon silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4cl5
Elevation: 300 to 1,100 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Herndon

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 34 inches: silty clay
BC - 34 to 45 inches: silty clay loam
C - 45 to 52 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
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: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

HdC2—Herndon silt loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4cl6
Elevation: 300 to 1,100 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Herndon

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 34 inches: silty clay
BC - 34 to 45 inches: silty clay loam
C - 45 to 52 inches: silt loam

Properties and qualities

Slope: 6 to 10 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
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

HdD2—Herndon silt loam, 10 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4cl7
Elevation: 300 to 1,100 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Herndon

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite or serecite schist

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 34 inches: silty clay
BC - 34 to 45 inches: silty clay loam
C - 45 to 52 inches: silt loam

Properties and qualities

Slope: 10 to 15 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
Available water supply, 0 to 60 inches: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

NIE2—Nanford loam, 15 to 25 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2wbbg
Elevation: 280 to 670 feet
Mean annual precipitation: 40 to 64 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Nanford and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nanford

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite and serecite schist

Typical profile

Ap - 0 to 3 inches: loam
Bt - 3 to 18 inches: silty clay loam
BC - 18 to 29 inches: silt loam
Cr - 29 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

Minor Components

Goldston

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Georgeville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

PkE—Pickens slaty silt loam, 10 to 25 percent slopes

Map Unit Setting

National map unit symbol: 4cm3
Elevation: 350 to 1,000 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Manteo

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Silty residuum weathered from argillite and serecite schist

Typical profile

A - 0 to 7 inches: channery silt loam
Bw - 7 to 20 inches: extremely channery silt loam
R - 20 to 26 inches: bedrock

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 0.28 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 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY880GA - Acidic high hills and isolated ridges, depth restriction, dry
Hydric soil rating: No

Sr—Starr soils

Map Unit Setting

National map unit symbol: 4cm7
Elevation: 310 to 670 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 49 to 73 degrees F
Frost-free period: 192 to 247 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Starr

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

Ap - 0 to 6 inches: loam
Bw - 6 to 39 inches: loam
C - 39 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Runoff class: Low
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: Rare
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): 2w
Hydrologic Soil Group: B
Ecological site: F136XY620GA - Flood plain forest, moist
Hydric soil rating: No

TaD2—Tarrus loam, 10 to 15 percent slopes, moderately eroded

Map Unit Setting
National map unit symbol: 2wb9w
Elevation: 350 to 680 feet
Mean annual precipitation: 40 to 64 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition
Tarrus and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tarrus

Setting
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey residuum weathered from sericite schist

Typical profile
A - 0 to 3 inches: loam
Bt - 3 to 30 inches: clay
Cr - 30 to 80 inches: bedrock

Properties and qualities
Slope: 10 to 15 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 0.28 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

Minor Components

Herndon

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

Georgeville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

TaE2—Tarrus loam, 15 to 25 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2wb9x
Elevation: 350 to 670 feet
Mean annual precipitation: 40 to 64 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Tarrus and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tarrus

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey residuum weathered from argillite and serecite schist

Typical profile

A - 0 to 3 inches: loam
Bt - 3 to 30 inches: clay
Cr - 30 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

Minor Components

Georgeville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Herndon

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

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Vegetative Productivity

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

Forestland Productivity

This table is designed to assist forestland owners or managers in planning the use of soils for wood crops. It provides the potential productivity of the soils for wood crops.

Potential productivity of merchantable or *common trees* on a soil is expressed as a site index and as a volume growth rate number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. *Common trees* are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding

site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *Base Age* is the age of trees in years on which the site index is based. "TA" indicates total age. "BH" indicates breast height age. "N/A" indicates that base age is not applicable.

The *Site Index Curve Number* is listed in the National Register of Site Index Curves. It identifies the site index curve used to determine the site index.

The *Volume Growth Rate* is the maximum wood volume annual growth rate likely to be produced by the tree species. This number, expressed as cubic feet per acre per year, is calculated at the age of culmination of the mean annual increment (CMAI). It indicates the maximum volume of wood fiber produced per year in a fully stocked, even-aged, unmanaged stand.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service, National Forestry Manual.

Report—Forestland Productivity

Forestland Productivity–Lancaster County, South Carolina				
Map unit symbol and soil name	**Potential productivity**			**Trees to manage**
	Common trees	**Site Index**	**Volume of wood fiber**	
			Cu ft/ac/yr	
CcB2—Cecil fine sandy loam, 2 to 6 percent slopes, eroded				
Cecil	Black oak	66	43.00	Loblolly pine, Yellow-poplar
	Loblolly pine	80	114.00	
	Northern red oak	82	57.00	
	Post oak	65	43.00	
	Scarlet oak	80	57.00	
	Shortleaf pine	69	114.00	
	Virginia pine	73	114.00	
Ch—Chewacla soils				
Chewacla	Loblolly pine	96	143.00	American sycamore, Green ash, Loblolly pine, Sweetgum, Yellow-poplar
	Sweetgum	97	129.00	
	Water oak	86	86.00	
	Yellow-poplar	100	114.00	

Forestland Productivity–Lancaster County, South Carolina				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
Co—Congaree soils				
Congaree	Cherrybark oak	107	57.00	American sycamore, Black walnut, Cherrybark oak, Eastern cottonwood, Loblolly pine, Sweetgum, Yellow-poplar
	Eastern cottonwood	107	143.00	
	Loblolly pine	90	129.00	
	Scarlet oak	100	57.00	
	Sweetgum	100	143.00	
	Willow oak	95	86.00	
	Yellow-poplar	107	114.00	
EnC2—Enon loam, 6 to 10 percent slopes, eroded				
Enon	Loblolly pine	73	100.00	Loblolly pine
	Northern red oak	84	57.00	
	Shortleaf pine	63	100.00	
	Sweetgum	78	72.00	
	Virginia pine	63	100.00	
	White oak	69	57.00	
	Yellow-poplar	88	86.00	
GeB2—Georgeville silt loam, 2 to 6 percent slopes, moderately eroded				
Georgeville, moderately eroded	Loblolly pine	81	114.10	Loblolly pine, Shortleaf pine, Yellow-poplar
	Longleaf pine	67	72.00	
	Scarlet oak	70	57.00	
	Shortleaf pine	63	100.50	
	Southern red oak	67	43.30	
	White oak	69	56.90	
GeC2—Georgeville silt loam, 6 to 10 percent slopes, eroded				
Georgeville	Loblolly pine	81	114.00	Black walnut, Eastern redcedar, Loblolly pine, Virginia pine, Yellow-poplar
	Longleaf pine	67	72.00	
	Scarlet oak	70	57.00	
	Shortleaf pine	63	100.00	
	Southern red oak	67	43.00	
	White oak	69	57.00	

Forestland Productivity–Lancaster County, South Carolina				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
GgC3—Georgeville silty clay loam, 6 to 10 percent slopes, severely eroded				
Georgeville, severely eroded	Loblolly pine	70	86.00	Loblolly pine, Virginia pine
	Longleaf pine	60	57.00	
GlB—Gills silt loam, 2 to 6 percent slopes				
Gills	Shortleaf pine	45	57.00	Eastern redcedar, Loblolly pine
GlB2—Gills silt loam, 2 to 6 percent slopes, eroded				
Gills	Shortleaf pine	45	57.00	Eastern redcedar, Loblolly pine
HdB2—Herndon silt loam, 2 to 6 percent slopes, eroded				
Herndon	Loblolly pine	80	114.00	Eastern redcedar, Loblolly pine, Virginia pine, Yellow-poplar
	Shortleaf pine	61	86.00	
	Southern red oak	72	57.00	
	White oak	65	43.00	
	Yellow-poplar	91	86.00	
HdC2—Herndon silt loam, 6 to 10 percent slopes, eroded				
Herndon	Loblolly pine	80	114.00	Eastern redcedar, Loblolly pine, Virginia pine, Yellow-poplar
	Shortleaf pine	61	86.00	
	Southern red oak	72	57.00	
	White oak	65	43.00	
	Yellow-poplar	91	86.00	
HdD2—Herndon silt loam, 10 to 15 percent slopes, eroded				
Herndon	Loblolly pine	80	114.00	Eastern redcedar, Loblolly pine, Virginia pine, Yellow-poplar
	Shortleaf pine	61	86.00	
	Southern red oak	72	57.00	
	White oak	65	43.00	
	Yellow-poplar	91	86.00	
NlE2—Nanford loam, 15 to 25 percent slopes, moderately eroded				
Nanford	Loblolly pine	80	114.00	Loblolly pine
	Northern red oak	66	43.00	
	Shortleaf pine	66	100.00	
	Virginia pine	69	114.00	

Forestland Productivity–Lancaster County, South Carolina				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			Cu ft/ac/yr	
PkE—Pickens slaty silt loam, 10 to 25 percent slopes				
Manteo	Loblolly pine	60	72.00	Loblolly pine, Shortleaf pine, Virginia pine
	Northern red oak	55	43.00	
	Shortleaf pine	50	72.00	
	Virginia pine	55	86.00	
Sr—Starr soils				
Starr	Eastern white pine	91	172.00	Black walnut, Green ash, Loblolly pine, Sweetgum, Yellow-poplar
	Loblolly pine	101	129.00	
	Shortleaf pine	75	114.00	
	Yellow-poplar	103	114.00	
TaD2—Tarrus loam, 10 to 15 percent slopes, moderately eroded				
Tarrus	Loblolly pine	78	114.00	Loblolly pine, Yellow-poplar
	Northern red oak	72	57.00	
	Virginia pine	68	100.00	
	Yellow-poplar	83	72.00	
TaE2—Tarrus loam, 15 to 25 percent slopes, moderately eroded				
Tarrus	Loblolly pine	78	114.00	Loblolly pine, Yellow-poplar
	Northern red oak	72	57.00	
	Virginia pine	68	100.00	
	Yellow-poplar	83	72.00	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

This table shows, for each soil that supports vegetation, the ecological site, plant association, or habitat type; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in the table follows.

An *ecological site, plant association, or habitat type* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site, plant association, or habitat type is typified by an association of species that differs from that of other ecological sites, plant associations, or habitat types in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service (NRCS). Descriptions of plant associations or habitat types are available from local U.S. Forest Service offices.

Total dry-weight production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic vegetation (the grasses, forbs, shrubs, and understory trees that make up most of the potential natural plant community on each soil) is listed by common name. Under *rangeland composition and forest understory*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The percentages are by dry weight for rangeland. Percentages for forest understory are by either dry weight or canopy cover. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in the "National Range and Pasture Handbook," which is available in local offices of NRCS or on the Internet.

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service, National range and pasture handbook.

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
CcB2—Cecil fine sandy loam, 2 to 6 percent slopes, eroded								
Cecil	Acidic upland forest, moist (F136XY820GA)	—	—	—	American holly			
					American plum			
					American witchhazel			
					black cherry			
					blackberry			
					common pawpaw			
					common persimmon			
					eastern hophornbeam			
					farkleberry			
					flowering dogwood			
					muscadine			
					redpurple beebalm			
					sourwood			
					sumac			
					trumpet creeper			

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
Ch—Chewacla soils								
Chewacla	Flood plain forest, wet (F136XY610GA)	—	—	—	American holly			
					black willow			
					eastern hophornbeam			
					flowering dogwood			
					greenbrier			
					hackberry			
					river birch			
					sassafras			
					sourwood			
					winged elm			
Co—Congaree soils								
Congaree	Flood plain forest, moist (F136XY620GA)	—	—	—	pineland threeawn		33	
					little bluestem		22	
					beaked panicum		19	
					other annual grasslikes		8	
					other shrubs		6	
					panicum		6	
					lespedeza		3	
					ticktrefoil		3	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
EnC2—Enon loam, 6 to 10 percent slopes, eroded								
Enon	Basic upland forest, moist (F136XY720NC)	—	—	—	eastern redcedar			
					flowering dogwood			
					greenbrier			
					holly			
GeB2—Georgeville silt loam, 2 to 6 percent slopes, moderately eroded								
Georgeville, moderately eroded	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
GeC2—Georgeville silt loam, 6 to 10 percent slopes, eroded								
Georgeville	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	
GgC3—Georgeville silty clay loam, 6 to 10 percent slopes, severely eroded								
Georgeville, severely eroded	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
GlB—Gills silt loam, 2 to 6 percent slopes								
Gills	Acidic upland forest, seasonally wet (F136XY810SC)	—	—	—	honeysuckle		20	
					little bluestem		20	
					Elliott's bluestem		10	
					lespedeza		10	
					other shrubs		10	
					other annual grasslikes		10	
					splitbeard bluestem		10	
					greenbrier		5	
					ticktrefoil		5	
GlB2—Gills silt loam, 2 to 6 percent slopes, eroded								
Gills	Acidic upland forest, seasonally wet (F136XY810SC)	—	—	—	honeysuckle		20	
					little bluestem		20	
					Elliott's bluestem		10	
					lespedeza		10	
					other shrubs		10	
					other annual grasslikes		10	
					splitbeard bluestem		10	
					greenbrier		5	
					ticktrefoil		5	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
HdB2—Herndon silt loam, 2 to 6 percent slopes, eroded								
Herndon	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	
HdC2—Herndon silt loam, 6 to 10 percent slopes, eroded								
Herndon	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
HdD2—Herndon silt loam, 10 to 15 percent slopes, eroded								
Herndon	Acidic upland forest, moist (F136XY820GA)	—	—	—	little bluestem		37	
					honeysuckle		29	
					panicum		8	
					unknown national vernacular name		8	
					switchcane		6	
					grape		4	
					lespedeza		4	
					tall oatgrass		2	
					ticktrefoil		2	
NIE2—Nanford loam, 15 to 25 percent slopes, moderately eroded								
Nanford	Acidic upland forest, depth restriction, dry-moist (F136XY830NC)	—	—	—	—			

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
PkE—Pickens slaty silt loam, 10 to 25 percent slopes								
Manteo	Acidic high hills and isolated ridges, depth restriction, dry (F136XY880GA)	—	—	—	American beech			
					chestnut oak			
					flowering dogwood			
					hickory			
					mountain laurel			
					scarlet oak			
					white oak			
Sr—Starr soils								
Starr	Flood plain forest, moist (F136XY620GA)	—	—	—	pineland threeawn		33	
					little bluestem		22	
					beaked panicum		19	
					other annual grasslikes		8	
					other shrubs		6	
					panicum		6	
					lespedeza		3	
					ticktrefoil		3	

Rangeland and Forest Vegetation Classification, Productivity, and Plant Composition–Lancaster County, South Carolina								
Map unit symbol and soil name	**Ecological Site, Plant Association, or Habitat Type**	**Total dry-weight production**			**Characteristic rangeland or forest understory vegetation**	**Composition**		
		Favorable year	**Normal year**	**Unfavorable year**			**Rangeland**	**Forest understory**
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct dry wt*	*Pct dry wt*	
TaD2—Tarrus loam, 10 to 15 percent slopes, moderately eroded								
Tarrus	Acidic upland forest, depth restriction, dry-moist (F136XY830NC)	—	—	—	hickory		4	
					Virginia pine		4	
					white oak		4	
					greenbrier		3	
					post oak		3	
					scarlet oak		3	
					chestnut oak		2	
					flowering dogwood		2	
					shortleaf pine		1	
TaE2—Tarrus loam, 15 to 25 percent slopes, moderately eroded								
Tarrus	Acidic upland forest, depth restriction, dry-moist (F136XY830NC)	—	—	—	hickory		4	
					Virginia pine		4	
					white oak		4	
					greenbrier		3	
					post oak		3	
					scarlet oak		3	
					chestnut oak		2	
					flowering dogwood		2	
					shortleaf pine		1	

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