Soil Survey of Sussex County, Virginia

United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

In cooperation with
Virginia Polytechnic
Institute and State
University

How To Use This Soil Survey

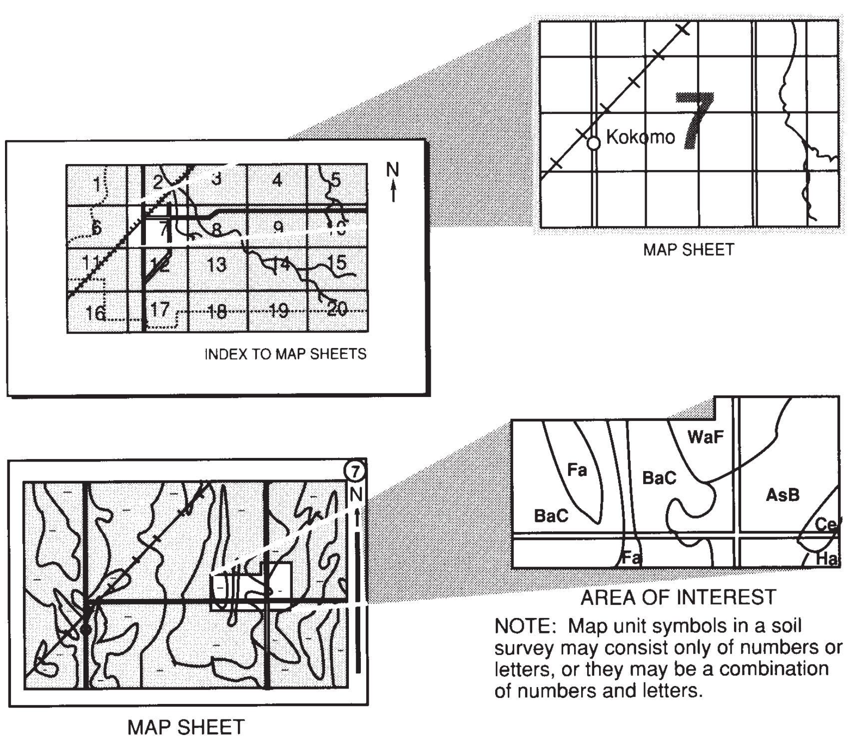
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication 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 agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Virginia Polytechnic Institute and State University. This survey was financed in part by the Chowan Basin (formally J.R. Horsley) Soil and Water Conservation District Board of Supervisors, the Sussex County Board of Supervisors, and the Virginia Department of Conservation and Recreation.

Major fieldwork for this soil survey was completed in 2002. Soil names and descriptions were approved in 2006. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Nondiscrimination Statement

Cover Caption

A view from a fire tower on Highway 40 overlooking the town of Sussex.

Additional information about the Nation’s natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2007

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are 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.

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.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

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Soil Survey of Sussex County, Virginia

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United States Department of Agriculture, Natural Resources Conservation Service,
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SUSSEX COUNTY is in the southeastern part of Virginia (fig. 1). The county covers 315,600 acres and is 45 miles southeast of the capital city of Richmond. Sussex, Virginia, is the county seat. Other cities in Sussex County are Wakefield, Waverly, Stony Creek, Jarrett, and Yale. In 2000, according to the Census Bureau, the population of the county was 12,504 (USDC, 2000).

General Nature of the Survey Area

This section provides general information about the survey area. It describes the physiography, relief, and drainage; agriculture; history; economy; natural resources; and climate.

Physiography, Relief, and Drainage

Most of Sussex County is in the Southern Coastal Plain Major Land Resource Area (MLRA). A small section of the western part of the county is in the Southern Piedmont Major Land Resource Area. Elevations range from about 20 feet above sea level to about 270 feet above sea level. The lowest elevation in the county is in an area where the Nottoway River crosses the Southampton County line, which is in the Southern

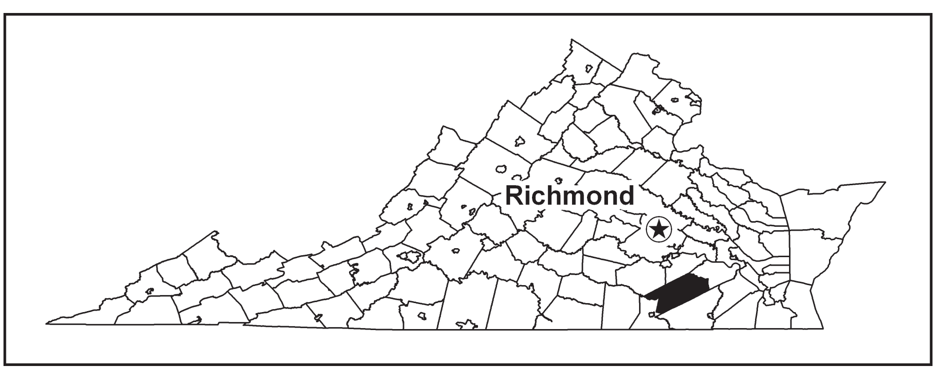

Figure 1.—Location of Sussex County in Virginia.

Coastal Plain portion of the county. The highest elevation is in an area in the western part of the county, which is in the Southern Piedmont portion of the county. Most of the county is drained by the Nottoway River and its tributaries. Some areas of the county are drained by the Coppahaunk Swamp, the Assamoosick Swamp, and the Seacock Swamp. The land surface generally is nearly level or gently sloping in the Coastal Plain portion of the county and is gently sloping to strongly sloping in the Piedmont portion of the county.

Agriculture

In 2002, according to the Census of Agriculture, about 74,196 acres in Sussex County was used for farmland (USDA, 2002). Of this, about 38,189 acres was cropland. Livestock and poultry farms in the county produce cattle and calves, hogs and pigs, sheep and lambs, and layers and broilers. Some of the harvested crops in the county include corn, which is used for grain and silage; wheat, oats, and barley, which are used for grain; soybeans; cotton; flue-cured tobacco; peanuts; and various types of hay. Some farms produce vegetables, which are harvested for sale.

History

Sussex County, Virginia, was formed in 1754 from part of Surry County, Virginia. Sussex County was named after Sussex County in England. The first settlements in Sussex County appeared just before 1700 when settlers started to move west and south across the Blackwater River from Surry County and other counties in the Tidewater region of Virginia (Sussex County Government, 2007). The first commercial peanut crop in the United States was grown here around 1842. Sussex County is still a fairly rural county. Agriculture and timber are the primary industries.

Economy

Agriculture and agriculture-related manufacturing are very important to the economy of Sussex County and account for over one-half of the basic employment in the county and more than one-quarter of its total employment. Other businesses that are important to the economy are manufacturing, peanut shelling, tourism, and non-local government (Sussex County Government, 2007).

Natural Resources

About 80 percent of the land in Sussex County is in commercial forest. Of this, about 99 percent of the forestland is privately owned. The predominant softwood in the county is loblolly pine and the predominant hardwoods are oak and hickory (Sussex County Government, 2007).

Water resources in the county include both surface water and ground water. The surface water consists primarily of the Nottoway River in the northeast and its tributaries. Wells that access the ground water in the county vary in depth from 550 feet in the west to 50 feet in the east (Sussex County Government, 2007).

Many mineral resources in Sussex County are used commercially. Sand and gravel, particularly from along Stony Creek, are used in asphalt; clay, from near Waverly, is used in brick and cement; and Marl, from near Wakefield, is used for agricultural purposes. There is also a deposit of heavy sand along State Route 619 that extends for 7 miles and covers 4,600 acres in northwestern Sussex County and southwestern Dinwiddie County. Some of the more valuable minerals that are found in Sussex County are ileminite and leucoxene, which are titanium-bearing minerals that primarily are used in the manufacturing of paint pigments; rutile, which is another titanium-bearing mineral that is used in making artificial joints and pacemakers and is also used by the aerospace industry; and zircon, which is used as a ceramic glaze and as refractory sand in steel manufacturing (Sussex County Government, 2007).

Climate

Climate data are provided in the tables "Temperature and Precipitation," "Freeze Dates in Spring and Fall," and "Growing Season." The data were recorded at Wakefield in the period 1983 to 2000 (the previous Wakefield station closed in 1978 and was at a different location; thus the 30-year normals are not available).

In winter, the average temperature is 40.2 degrees F and the average daily minimum temperature is 29.7 degrees. The lowest temperature on record, which occurred at Wakefield on January 21, 1985, is -8 degrees. In summer, the average temperature is 76.6 degrees and the average daily maximum temperature is 87.1 degrees. The highest recorded temperature, which occurred on September 12, 1983, is 105 degrees.

Growing degree days are shown in the table "Temperature and Precipitation." They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 45.69 inches. Of this, 28.73 inches, or 63 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 7.50 inches on September 27, 1985. Thunderstorms occur on about 37 days each year, and most occur in June through August.

The average seasonal snowfall is about 4.6 inches. The greatest snow depth at any one time during the period of record was 10 inches on January 25, 2000. On the average, 4 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 57 percent. Humidity is higher at night, and the average at dawn is about 79 percent. The sun shines 64 percent of the time possible in summer and 56 percent in winter. The prevailing wind is from the southwest, except in September and October when it is from the northeast. Average windspeed is highest, around 12 miles per hour, from February through April.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified 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 dug many holes to study the soil profile, which 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. 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 the 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.

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.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

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. The contrasting components are mentioned in the map unit descriptions. 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 the principal hazards and limitations to be considered in planning for specific uses.

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, Warne fine sandy loam, 0 to 2 percent slopes, rarely flooded, is a phase of the Warne series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes 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. Emporia-Slagle complex, 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. Bibb and Chastain soils, 0 to 2 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Water is an example.

The table “Acreage and Proportionate Extent of the Soils” lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

1A—Altavista fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 49 to 164 feet
Size and shape of areas: Irregular; 5 to 150 acres

Map Unit Composition

Altavista: Typically 85 percent, ranging from about 70 to 90 percent

Typical Profile

Surface layer:
0 to 11 inches—brown fine sandy loam

Subsoil:
11 to 19 inches—light yellowish brown loam
19 to 26 inches—yellowish brown clay loam
26 to 38 inches—yellowish brown sandy clay loam; light gray iron depletions and brownish yellow masses of oxidized iron

Substratum:
38 to 51 inches—light gray sandy clay loam; brownish yellow and yellowish red masses of oxidized iron
51 to 72 inches—brownish yellow sandy loam; light gray iron depletions

Minor Components

Dissimilar components:
- State soils, which are well drained; in the higher areas

- Dogue soils, which are moderately well drained; in similar areas
- Seabrook soils, which are moderately well drained; in similar areas
- Augusta soils, which are somewhat poorly drained; in the lower areas
- Ocilla soils, which are somewhat poorly; in drainageways

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 2.5 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, wheat, and grass-legume hay

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength of this soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2w
Virginia soil management group: B
Hydric soil: No

1B—Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces

Position on the landform: Treads
Elevation: 82 to 164 feet
Size and shape of areas: Irregular; 10 to 70 acres

Map Unit Composition

Altavista: Typically 85 percent, ranging from about 70 to 90 percent

Typical Profile

Surface layer:
0 to 11 inches—brown fine sandy loam

Subsoil:
11 to 19 inches—light yellowish brown loam
19 to 26 inches—yellowish brown clay loam
26 to 38 inches—yellowish brown sandy clay loam; light gray iron depletions and brownish yellow masses of oxidized iron

Substratum:
38 to 51 inches—light gray sandy clay loam; brownish yellow and yellowish red masses of oxidized iron
51 to 72 inches—brownish yellow sandy loam; light gray iron depletions

Minor Components

Dissimilar components:
- State soils, which are well drained; in the higher areas
- Dogue soils, which are moderately well drained; in similar areas
- Seabrook soils, which are moderately well drained; in similar areas
- Augusta soils, which are somewhat poorly drained; in the lower areas
- Ocilla soils, which are somewhat poorly drained; in drainageways

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 2.5 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: B
Hydric soil: No

2B—Appling sandy loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves
Elevation: 164 to 246 feet
Size and shape of areas: Irregular; 15 to 175 acres

Map Unit Composition

Appling and similar soils: Typically 80 percent, ranging from about 75 to 95 percent

Typical Profile

Surface layer:
0 to 7 inches—olive brown sandy loam

Subsurface layer:
7 to 11 inches—brownish yellow sandy loam

Subsoil:
11 to 16 inches—brownish yellow sandy clay loam
16 to 33 inches—brownish yellow clay; common red mottles
33 to 43 inches—brownish yellow sandy clay loam; many red mottles

Substratum:
43 to 72 inches—yellowish red sandy loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in depressional areas and on very broad summits

Similar components:
- Faceville soils, which are well drained; on high stream terraces
- Georgeville soils, which are well drained; on very broad summits

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Well suited to wheat and grass-legume hay; moderately suited to corn and soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and yellow-poplar
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The low strength of the soil may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: V
Hydric soil: No

2C—Appling sandy loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves
Elevation: 148 to 246 feet
Size and shape of areas: Irregular; 20 to 175 acres

Map Unit Composition

Appling and similar soils: Typically 75 percent, ranging from about 70 to 80 percent

Typical Profile

Surface layer:
0 to 7 inches—olive brown sandy loam

Subsurface layer:
7 to 11 inches—brownish yellow sandy loam

Subsoil:
11 to 16 inches—brownish yellow sandy clay loam
16 to 33 inches—brownish yellow clay; common red mottles
33 to 43 inches—brownish yellow sandy clay loam; many red mottles

Substratum:
43 to 72 inches—yellowish red sandy loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in depressional areas and on very broad summits

Similar components:
- Faceville soils, which are well drained; on high stream terraces
- Georgeville soils, which are well drained; on very broad summits

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and yellow-poplar
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil may cause structural damage to local roads and streets.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: V
Hydric soil: No

3A—Augusta sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces and drainageways
Position on the landform: Treads and base slopes
Elevation: 49 to 148 feet
Size and shape of areas: Oblong; 5 to 200 acres

Map Unit Composition

Augusta: Typically 85 percent, ranging from about 70 to 90 percent

Typical Profile

Organic layer:
0 to 3 inches—partially decayed pine and oak litter

Surface layer:
3 to 6 inches—brown sandy loam

Subsurface layer:
6 to 11 inches—light yellowish brown sandy loam; light brownish gray iron depletions and olive yellow masses of oxidized iron

Subsoil:
11 to 26 inches—light yellowish brown sandy clay loam; olive yellow masses of oxidized iron
26 to 36 inches—grayish brown sandy clay loam; olive yellow masses of oxidized iron
36 to 46 inches—light gray sandy clay loam; olive yellow masses of oxidized iron

Substratum:
46 to 54 inches—white sandy loam
54 to 65 inches—white sand; light brownish gray iron depletions and pale yellow masses of oxidized iron
65 to 84 inches—brownish yellow sand; white iron depletions and pale yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Altavista soils, which are moderately well drained; in the slightly higher convex positions
- Warne soils, which are somewhat poorly drained; in the lower positions
- Tomotley soils, which are poorly drained; in the lower positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Somewhat poorly drained
Depth to seasonal high water table: From about 1.0 to 2.0 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, peanuts, and wheat; poorly suited to grass-legume hay
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Moderately suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine and southern red oak; moderately suited to sweetgum
- The wetness of the soil may limit the use of log trucks.
- This soil is well suited to haul roads and log landings.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: Z
Hydric soil: No

4A—Bibb and Chastain soils, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Flood plains
Position on the landform: Treads
Elevation: 33 to 246 feet
Size and shape of areas: Long and narrow; 5 to 2,500 acres

Map Unit Composition

Bibb: Typically 50 percent, ranging from about 30 to 70 percent
Chastain: Typically 45 percent, ranging from about 25 to 65 percent

Typical Profile

Bibb
Surface layer:
0 to 16 inches—very dark gray fine sandy loam

Substratum:
16 to 25 inches—gray sand
25 to 40 inches—olive gray fine sandy loam
40 to 50 inches—very dark gray loam
50 to 55 inches—dark gray gravelly sand
55 to 70 inches—very dark gray fine sandy loam

Chastain
Surface layer:
0 to 3 inches—very dark grayish brown loam

Subsoil:
3 to 12 inches—dark gray clay loam; olive yellow masses of oxidized iron
12 to 49 inches—gray clay loam; olive yellow masses of oxidized iron

Substratum:
49 to 60 inches—gray clay loam; olive yellow masses of oxidized iron
60 to 70 inches—gray stratified clay loam to sandy clay loam; olive yellow masses of oxidized iron
70 to 84 inches—light gray clay; olive yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Myatt soils, which are poorly drained; on the upper part of flood plains
- Seabrook soils, which are moderately well drained; on adjacent stream terraces

Soil Properties and Qualities

Available water capacity: Bibb—moderate (about 7.7 inches); Chastain—moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Bibb—moderately high (about 0.57 in/hr); Chastain—moderately low (about 0.06 in/hr)
Drainage class: Poorly drained
Depth to seasonal high water table: From about 0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None

Shrink-swell potential: Bibb—low; Chastain—moderate
Runoff class: Very high
Parent material: Bibb—loamy alluvium; Chastain—clayey alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited

Pasture
Suitability: Poorly suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- Flooding may cause damage to haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- Flooding limits the use of these soils for building site development.

Septic tank absorption fields
- Flooding limits the use of these soils for septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of these soils.
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Bibb—6w; Chastain—7w
Virginia soil management group: Bibb—EE; Chastain—LL
Hydric soil: Yes

5A—Bojac loamy sand, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 49 to 131 feet
Size and shape of areas: Irregular; 5 to 80 acres

Map Unit Composition

Bojac: Typically 70 percent, ranging from about 50 to 95 percent

Typical Profile

Surface layer:
0 to 13 inches—light olive brown loamy sand; black manganese coatings

Subsoil:
13 to 30 inches—yellowish brown sandy loam; black manganese coatings and dark yellowish brown and brownish yellow masses of oxidized iron
30 to 37 inches—yellowish brown sandy loam
37 to 48 inches—yellowish brown sandy loam; strong brown masses of oxidized iron

Substratum:
48 to 66 inches—yellowish brown and strong brown sand; white iron depletions

Minor Components

Dissimilar components:
- Tarboro soils, which are somewhat excessively drained; in similar positions
- State soils, which are well drained; in similar positions
- Altavista soils, which are moderately well drained; in swales and shallow depressions

Soil Properties and Qualities

Available water capacity: Low (about 5.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: From about 4.0 to 6.6 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Parent material: Coarse-loamy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to peanuts, wheat, and grass-legume hay; moderately suited to corn and soybeans
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited

Woodland
Suitability: Moderately suited to loblolly pine, southern red oak, and sweetgum
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields

- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets

- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2s
Virginia soil management group: DD
Hydric soil: No

6A—Buncombe loamy sand, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Flood plains
Position on the landform: Treads and risers
Elevation: 49 to 115 feet
Size and shape of areas: Irregular; 5 to 80 acres

Map Unit Composition

Buncombe: Typically 90 percent, ranging from about 80 to 100 percent

Typical Profile

Organic layer:
0 to 2 inches—partially decayed pine and oak litter

Surface layer:
2 to 7 inches—very dark grayish brown loamy sand

Substratum:
7 to 38 inches—olive yellow loamy sand
38 to 58 inches—pale yellow sand
58 to 84 inches—olive yellow gravelly sand

Minor Components

Dissimilar components:

- Seabrook soils, which are moderately well drained; in the slightly lower positions

Soil Properties and Qualities

Available water capacity: Low (about 3.1 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Drainage class: Excessively drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Parent material: Sandy alluvium

Use and Management Considerations

Cropland

Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to corn and soybeans
- The limited available water capacity may cause plants to suffer from moisture stress.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.
- Flooding may damage crops.

Pasture

Suitability: Moderately suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- Flooding may damage pastures.

Woodland

Suitability: Well suited to loblolly pine and yellow-poplar
- Flooding may cause damage to haul roads.
- Flooding restricts the safe use of roads by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- Flooding limits the use of this soil for septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: II
Hydric soil: No

7A—Chastain loam, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Flood plains
Position on the landform: Treads and risers
Elevation: 49 to 180 feet
Size and shape of areas: Long and narrow; 5 to 2,500 acres

Map Unit Composition

Chastain and similar soils: Typically 85 percent, ranging from about 75 to 90 percent

Typical Profile

Surface layer:
0 to 3 inches—very dark grayish brown loam

Subsoil:
3 to 12 inches—dark gray clay loam; olive yellow masses of oxidized iron
12 to 49 inches—gray clay loam; olive yellow masses of oxidized iron

Substratum:
49 to 60 inches—gray clay loam; olive yellow masses of oxidized iron
60 to 70 inches—gray stratified clay loam to sandy clay loam; olive yellow masses of oxidized iron
70 to 84 inches—light gray clay; olive yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Mattan soils, which are very poorly drained; in the larger swamps
- Chewacla soils, which are somewhat poorly drained; in similar positions
- Altavista soils, which are moderately well drained; on adjacent stream terraces

Similar components:
- Roanoke soils, which are poorly drained; on the upper part of flood plains

Soil Properties and Qualities

Available water capacity: Moderate (about 8.3 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Poorly drained
Depth to seasonal high water table: From about 0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Parent material: Clayey alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited

Pasture
Suitability: Unsuited

Woodland
Suitability: Moderately suited to sweetgum
- Flooding may cause damage to haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- Flooding limits the use of this soil for septic tank absorption fields.

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7w
Virginia soil management group: LL
Hydric soil: Yes

8A—Chewacla loam, 0 to 2 percent slopes, occasionally flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Flood plains
Position on the landform: Treads and risers
Elevation: 33 to 164 feet
Size and shape of areas: Long and narrow; 5 to 350 acres

Map Unit Composition

Chewacla: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 6 inches—olive brown loam; black manganese coatings and light olive brown masses of oxidized iron

Subsoil:
6 to 12 inches—olive brown silty clay loam; black manganese coatings and grayish brown iron depletions
12 to 23 inches—strong brown loam; grayish brown iron depletions and black manganese coatings
23 to 32 inches—light olive brown loam; light brownish gray iron depletions and black manganese coatings

Substratum:
32 to 40 inches—grayish brown silty clay loam; black manganese coatings, gray clay depletions, and brownish yellow and yellowish brown masses of oxidized iron
40 to 45 inches—grayish brown silty clay loam; yellowish brown and brownish yellow masses of oxidized iron and black manganese coatings
45 to 53 inches—grayish brown silty clay loam; black manganese coatings and yellowish brown and brownish yellow masses of oxidized iron
53 to 70 inches—light yellowish brown and dark yellowish brown silt loam; black manganese coatings, gray iron depletions, and strong brown masses of oxidized iron

70 to 84 inches—gray silt loam; black manganese coatings and dark yellowish brown and yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Tarboro soils, which are somewhat excessively drained; on adjacent stream terraces
- Seabrook soils, which are moderately well drained; on adjacent stream terraces
- Bibb soils, which are poorly drained; on the upper part of flood plains

Soil Properties and Qualities

Available water capacity: Very high (about 12.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Somewhat poorly drained
Depth to seasonal high water table: From about 0.5 to 2.0 feet
Water table kind: Apparent
Flooding hazard: Occasional
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, wheat, and grass-legume hay
- Flooding may damage crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to yellow-poplar and sweetgum
- Flooding may cause damage to haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- Flooding limits the use of this soil for septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: I
Hydric soil: No

9A—Craven loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 98 to 131 feet
Size and shape of areas: Irregular; 5 to 400 acres

Map Unit Composition

Craven and similar soils: Typically 70 percent, ranging from about 60 to 80 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 25 inches—yellowish brown clay; light brownish gray iron depletions and red and yellowish red masses of oxidized iron
25 to 38 inches—light gray clay; yellowish brown, strong brown, and yellowish red masses of oxidized iron
38 to 54 inches—yellowish brown clay loam; light gray iron depletions and yellowish red and yellowish brown masses of oxidized iron

Substratum:
54 to 64 inches—yellowish brown sandy clay loam; light gray iron depletions

Minor Components

Dissimilar components:
- Yemassee soils, which are somewhat poorly drained and have less clay in the subsoil than the Craven soil; in the lower areas
- Warne soils, which are somewhat poorly drained; in the lower areas

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Craven soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.8 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 2.0 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine and southern red oak
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2w
Virginia soil management group: HH
Hydric soil: No

9B—Craven loam, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 98 to 131 feet
Size and shape of areas: Irregular; 5 to 350 acres

Map Unit Composition

Craven and similar soils: Typically 60 percent, ranging from about 50 to 70 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 25 inches—yellowish brown clay; light brownish gray iron depletions and red and yellowish red masses of oxidized iron
25 to 38 inches—light gray clay; yellowish brown, strong brown, and yellowish red masses of oxidized iron
38 to 54 inches—yellowish brown clay loam; light gray iron depletions and yellowish red and yellowish brown masses of oxidized iron

Substratum:
54 to 64 inches—yellowish brown sandy clay loam; light gray iron depletions

Minor Components

Dissimilar components:
- Emporia soils, which are well drained and have less clay in the subsoil than the Craven soil; in the higher areas
- Yemassee soils, which are somewhat poorly drained and have less clay in the subsoil than the Craven soil; in the lower areas
- Myatt soils, which are poorly drained and have less clay in the subsoil than the Craven soil; in the lower areas

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Craven soil; in similar areas
- Eulonia soils; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.8 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 2.0 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine and southern red oak
- The low strength of the soil interferes with the construction of haul roads and log landings.

- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: HH
Hydric soil: No

10C3—Craven clay loam, 6 to 10 percent slopes, severely eroded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 98 to 131 feet
Size and shape of areas: Long and narrow; 5 to 700 acres

Map Unit Composition

Craven and similar soils: Typically 70 percent, ranging from about 60 to 85 percent

Typical Profile

Surface layer:
0 to 4 inches—yellowish brown clay loam

Subsoil:
4 to 11 inches—gray, yellowish red, strong brown, and yellowish brown clay
11 to 23 inches—yellowish brown, strong brown, yellowish red, red, and gray clay
23 to 70 inches—yellowish brown, dark red, strong brown, and gray sandy clay loam

Minor Components

Dissimilar components:
- Emporia soils, which are well drained and have less clay in the subsoil than the Craven soil; in the higher areas

- Ocilla soils, which are somewhat poorly drained and have less clay in the subsoil than the Craven soil; in the lower areas

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Craven soil; in similar areas
- Eulonia soils; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.8 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 2.0 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- Erosion has removed part of the surface soil, and the remaining surface soil is less productive and more difficult to manage.
- The high clay content of the soil restricts the rooting depth of crops.
- Clods may form if the soil is tilled when wet.
- The risk of compaction increases when the soil is wet.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to sweetgum
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: HH
Hydric soil: No

11A—Dogue loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 49 to 115 feet
Size and shape of areas: Irregular; 5 to 200 acres

Map Unit Composition

Dogue: Typically 70 percent, ranging from about 50 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—brown loam

Subsoil:
10 to 21 inches—yellowish brown clay loam
21 to 34 inches—yellowish brown, gray, and strong brown clay
34 to 45 inches—strong brown and gray clay; black iron-manganese concretions

Substratum:
45 to 60 inches—brown sandy clay loam

Minor Components

Dissimilar components:
- Seabrook soils, which are moderately well drained and have a sandy subsoil; in similar areas
- Altavista soils, which are moderately well drained and have less clay in the subsoil than the Dogue soil; in similar areas

- Augusta soils, which are somewhat poorly drained; in the slightly lower areas
- Roanoke soils, which are poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Parent material: Clayey alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine and southern red oak; moderately suited to yellow-poplar and sweetgum
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2w
Virginia soil management group: K
Hydric soil: No

11B—Dogue loam, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 66 to 115 feet
Size and shape of areas: Irregular; 5 to 30 acres

Map Unit Composition

Dogue: Typically 70 percent, ranging from about 50 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—brown loam

Subsoil:
10 to 21 inches—yellowish brown clay loam
21 to 34 inches—yellowish brown, gray, and strong brown clay
34 to 45 inches—strong brown and gray clay; black iron-manganese concretions

Substratum:
45 to 60 inches—brown sandy clay loam

Minor Components

Dissimilar components:
- Seabrook soils, which are moderately well drained and have a sandy subsoil; in similar areas
- Altavista soils, which are moderately well drained and have less clay in the subsoil than the Dogue soil; in similar areas
- Augusta soils, which are somewhat poorly drained; in the slightly lower areas
- Roanoke soils, which are poorly drained; in the lower areas
- Tomotley soils, which are poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Parent material: Clayey alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine and southern red oak; moderately suited to yellow-poplar and sweetgum
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: K
Hydric soil: No

12A—Emporia-Slagle complex, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 98 to 180 feet
Size and shape of areas: Irregular; 5 to 300 acres

Map Unit Composition

Emporia: Typically 50 percent, ranging from about 30 to 60 percent
Slagle: Typically 25 percent, ranging from about 10 to 40 percent

Typical Profile

Emporia
Surface layer:
0 to 6 inches—brown fine sandy loam

Subsurface layer:
6 to 14 inches—light yellowish brown loamy fine sand

Subsoil:
14 to 18 inches—yellowish brown fine sandy loam; light yellowish brown masses of oxidized iron
18 to 41 inches—strong brown sandy clay loam; yellowish red masses of oxidized iron
41 to 54 inches—strong brown sandy clay; light gray iron depletions and yellowish red masses of oxidized iron

Substratum:
54 to 72 inches—light gray, yellowish red, brownish yellow, and strong brown stratified sandy loam to sandy clay loam

Slagle
Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam
23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Rumford soils, which are well drained and have less clay in the subsoil than the Emporia and Slagle soils; on small knolls
- Nansemond soils, which are moderately well drained and have less clay in the subsoil than the Emporia and Slagle soils; at the heads of drainageways
- Yemassee soils, which are somewhat poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Emporia—moderate (about 6.6 inches); Slagle—moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Emporia—moderately high (about 0.20 in/hr); Slagle—moderately low (about 0.06 in/hr)
Drainage class: Emporia—well drained; Slagle—moderately well drained
Depth to seasonal high water table: Emporia—from about 3.0 to 4.5 feet; Slagle—from about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to soybeans, peanuts, wheat, and grass-legume hay; moderately suited to corn

Pasture
Suitability: Well suited

Woodland

Suitability: Moderately suited to loblolly pine and southern red oak
- These soils are well suited to haul roads and log landings.
- These soils are well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: Emporia—1; Slagle—2w
Virginia soil management group: Emporia—R; Slagle—K
Hydric soil: No

12B—Emporia-Slagle complex, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 49 to 262 feet
Size and shape of areas: Irregular; 5 to 500 acres

Map Unit Composition

Emporia: Typically 60 percent, ranging from about 50 to 80 percent
Slagle: Typically 25 percent, ranging from about 10 to 30 percent

Typical Profile

Emporia

Surface layer:
0 to 6 inches—brown fine sandy loam

Subsurface layer:
6 to 14 inches—light yellowish brown loamy fine sand

Subsoil:
14 to 18 inches—yellowish brown fine sandy loam; light yellowish brown masses of oxidized iron
18 to 41 inches—strong brown sandy clay loam; yellowish red masses of oxidized iron
41 to 54 inches—strong brown sandy clay; light gray iron depletions and yellowish red masses of oxidized iron

Substratum:
54 to 72 inches—light gray, yellowish red, brownish yellow, and strong brown stratified sandy loam to sandy clay loam

Slagle

Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam
23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Rumford soils, which are well drained and have less clay in the subsoil than the Emporia and Slagle soils; on small knolls
- Uchee soils, which are well drained and have a thick, sandy surface layer; on small knolls
- Craven and Eulonia soils, which are moderately well drained and have more clay in the subsoil than the Emporia and Slagle soils; in the slightly lower areas
- Yemassee soils, which are somewhat poorly drained; in the lower areas
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Emporia and Slagle soils; in the lower areas on flood plains

Soil Properties and Qualities

Available water capacity: Emporia—moderate (about 6.6 inches); Slagle—moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Emporia—moderately high (about 0.20 in/hr); Slagle—moderately low (about 0.06 in/hr)
Drainage class: Emporia—well drained; Slagle—moderately well drained
Depth to seasonal high water table: Emporia—from about 3.0 to 4.5 feet; Slagle—from about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to soybeans, peanuts, wheat, and grass-legume hay; moderately suited to corn
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- These soils are well suited to haul roads and log landings.
- These soils are well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: Emporia—R; Slagle—K
Hydric soil: No

12C—Emporia-Slagle complex, 6 to 10 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 82 to 148 feet
Size and shape of areas: Long and narrow; 5 to 110 acres

Map Unit Composition

Emporia: Typically 55 percent, ranging from about 45 to 70 percent
Slagle: Typically 30 percent, ranging from about 15 to 40 percent

Typical Profile

Emporia
Surface layer:
0 to 6 inches—brown fine sandy loam

Subsurface layer:
6 to 14 inches—light yellowish brown loamy fine sand

Subsoil:
14 to 18 inches—yellowish brown fine sandy loam; light yellowish brown masses of oxidized iron
18 to 41 inches—strong brown sandy clay loam; yellowish red masses of oxidized iron
41 to 54 inches—strong brown sandy clay; light gray iron depletions and yellowish red masses of oxidized iron

Substratum:
54 to 72 inches—light gray, yellowish red, brownish yellow, and strong brown stratified sandy loam to sandy clay loam

Slagle
Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam

23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Rumford soils, which are well drained and have less clay in the subsoil than the Emporia and Slagle soils; on small knolls
- Craven and Eulonia soils, which are moderately well drained and have more clay in the subsoil than the Emporia and Slagle soils; in the slightly lower areas
- Yemassee soils, which are somewhat poorly drained; in the lower areas
- Myatt soils, which are poorly drained; in the lower areas and in depressions

Soil Properties and Qualities

Available water capacity: Emporia—moderate (about 6.6 inches); Slagle—moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Emporia—moderately high (about 0.20 in/hr); Slagle—moderately low (about 0.06 in/hr)
Drainage class: Emporia—well drained; Slagle—moderately well drained
Depth to seasonal high water table: Emporia—from about 3.0 to 4.5 feet; Slagle—from about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to peanuts and grass-legume hay; moderately suited to corn, soybeans, and wheat
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- These soils are well suited to haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: Emporia—R; Slagle—K
Hydric soil: No

13A—Eulonia fine sandy loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 82 to 131 feet
Size and shape of areas: Irregularly rectangular or irregularly oval; 5 to 320 acres

Map Unit Composition

Eulonia and similar soils: Typically 55 percent, ranging from about 45 to 80 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam

Subsoil:
7 to 17 inches—yellowish brown clay; yellowish red masses of oxidized iron
17 to 24 inches—yellowish brown clay; light brownish gray iron depletions and yellowish red masses of oxidized iron
24 to 31 inches—brownish yellow sandy clay; light gray iron depletions
31 to 45 inches—light gray sandy clay loam; strong brown and brownish yellow masses of oxidized iron

Substratum:
45 to 60 inches—brownish yellow sandy loam; light gray iron depletions
60 to 75 inches—yellowish brown and brownish yellow sandy loam; light gray iron depletions

Minor Components

Dissimilar components:
- Emporia soils, which are well drained; in the higher convex areas
- Yemassee soils, which are somewhat poorly drained and have less clay in the subsoil than the Eulonia soil; in the lower linear or concave areas
- Ocilla soils, which are somewhat poorly drained, have a thick, sandy surface layer, and have less clay in the subsoil than the Eulonia soil; in drainageways

- Warne soils, which are somewhat poorly drained; in the lower linear or concave areas

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Eulonia soil; in similar areas
- Craven soils, which are moderately well drained; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.
- This soil is well suited to haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2w
Virginia soil management group: K
Hydric soil: No

13B—Eulonia fine sandy loam, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 49 to 131 feet
Size and shape of areas: Irregular; 5 to 140 acres

Map Unit Composition

Eulonia and similar soils: Typically 65 percent, ranging from about 55 to 80 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam

Subsoil:
7 to 17 inches—yellowish brown clay; yellowish red masses of oxidized iron
17 to 24 inches—yellowish brown clay; light brownish gray iron depletions and yellowish red masses of oxidized iron
24 to 31 inches—brownish yellow sandy clay; light gray iron depletions
31 to 45 inches—light gray sandy clay loam; strong brown and brownish yellow masses of oxidized iron

Substratum:
45 to 60 inches—brownish yellow sandy loam; light gray iron depletions
60 to 75 inches—yellowish brown and brownish yellow sandy loam; light gray iron depletions

Minor Components

Dissimilar components:
- Emporia soils, which are well drained; in the higher convex areas
- Yemassee soils, which are somewhat poorly drained and have less clay in the subsoil than the Eulonia soil; in the lower linear or concave areas
- Warne soils, which are somewhat poorly drained; in the lower linear or concave areas
- Roanoke soils, which are poorly drained; on flood plains

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Eulonia soil; in similar areas
- Craven soils, which are moderately well drained; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.
- This soil is well suited to haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: K
Hydric soil: No

13C—Eulonia fine sandy loam, 6 to 10 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 82 to 131 feet
Size and shape of areas: Long and narrow; 5 to 350 acres

Map Unit Composition

Eulonia and similar soils: Typically 45 percent, ranging from about 40 to 70 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam

Subsoil:
7 to 17 inches—yellowish brown clay; yellowish red masses of oxidized iron
17 to 24 inches—yellowish brown clay; light brownish gray iron depletions and yellowish red masses of oxidized iron
24 to 31 inches—brownish yellow sandy clay; light gray iron depletions
31 to 45 inches—light gray sandy clay loam; strong brown and brownish yellow masses of oxidized iron

Substratum:
45 to 60 inches—brownish yellow sandy loam; light gray iron depletions
60 to 75 inches—yellowish brown and brownish yellow sandy loam; light gray iron depletions

Minor Components

Dissimilar components:
- Nevarc soils, which are moderately well drained; in similar areas
- Ocilla soils, which are somewhat poorly drained, have a thick, sandy surface layer, and have less clay in the subsoil than the Eulonia soil; in drainageways

Similar components:
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Eulonia soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to wheat and grass-legume hay; moderately suited to corn, soybeans, and peanuts
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.
- This soil is well suited to haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: K
Hydric soil: No

14B—Faceville fine sandy loam, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 197 to 262 feet
Size and shape of areas: Irregular; 5 to 200 acres

Map Unit Composition

Faceville and similar soils: Typically 85 percent, ranging from about 80 to 100 percent

Typical Profile

Surface layer:
0 to 7 inches—yellowish brown fine sandy loam

Subsurface layer:
7 to 9 inches—yellowish brown fine sandy loam

Subsoil:
9 to 18 inches—yellowish brown sandy clay
18 to 30 inches—strong brown and reddish yellow sandy clay
30 to 47 inches—red and yellowish red clay loam
47 to 67 inches—yellowish red, red, and strong brown sandy clay loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in the lower areas

Similar components:
- Appling soils, which are well drained and have thinner sola than the Faceville soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to soybeans, peanuts, wheat, tobacco, and grass-legume hay; moderately suited to corn
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- This soil is well suited to building sites.

Septic tank absorption fields
- This soil is well suited to septic tank absorption fields.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: R
Hydric soil: No

14C—Faceville fine sandy loam, 6 to 10 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads

Elevation: 164 to 246 feet
Size and shape of areas: Irregular; 5 to 100 acres

Map Unit Composition

Faceville and similar soils: Typically 80 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 7 inches—yellowish brown fine sandy loam

Subsurface layer:
7 to 9 inches—yellowish brown fine sandy loam

Subsoil:
9 to 18 inches—yellowish brown sandy clay
18 to 30 inches—strong brown and reddish yellow sandy clay
30 to 47 inches—red and yellowish red clay loam
47 to 67 inches—yellowish red, red, and strong brown sandy clay loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in the lower areas

Similar components:
- Appling and Georgeville soils, which are well drained and have thinner sola than the Faceville soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to grass-legume hay; moderately suited to corn, soybeans, peanuts, and wheat
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Building sites
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: R
Hydric soil: No

15B—Georgeville silt loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves
Elevation: 164 to 230 feet
Size and shape of areas: Irregular; 5 to 30 acres

Map Unit Composition

Georgeville and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsoil:
4 to 8 inches—red silty clay loam
8 to 21 inches—red clay
21 to 51 inches—red silty clay

Substratum:
51 to 75 inches—red silty clay loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in the lower areas

Similar components:
- Appling and Faceville soils, which are well drained and have thicker sola than the Georgeville soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Well suited to wheat and grass-legume hay; moderately suited to corn and soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Building sites
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- This soil is well suited to septic tank absorption fields.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: X
Hydric soil: No

15C—Georgeville silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves and side slopes
Elevation: 148 to 230 feet
Size and shape of areas: Irregular; 5 to 60 acres

Map Unit Composition

Georgeville and similar soils: Typically 75 percent, ranging from about 65 to 90 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsoil:
4 to 8 inches—red silty clay loam
8 to 21 inches—red clay
21 to 51 inches—red silty clay

Substratum:
51 to 75 inches—red silty clay loam

Minor Components

Dissimilar components:
- Helena soils, which are moderately well drained; in the lower areas

Similar components:
- Appling and Faceville soils, which are well drained and have thicker sola than the Georgeville soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: X
Hydric soil: No

15D—Georgeville silt loam, 15 to 25 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Side slopes
Elevation: 115 to 246 feet
Size and shape of areas: Long and narrow; 5 to 470 acres

Map Unit Composition

Georgeville and similar soils: Typically 70 percent, ranging from about 60 to 90 percent

Typical Profile

Surface layer:
0 to 4 inches—brown silt loam

Subsoil:
4 to 8 inches—red silty clay loam
8 to 21 inches—red clay
21 to 51 inches—red silty clay

Substratum:
51 to 75 inches—red silty clay loam

Minor Components

Dissimilar components:

- Helena soils, which are moderately well drained; in the lower areas
- Chastain soils, which are poorly drained; on flood plains

Similar components:

- Appling and Faceville soils, which are well drained and have thicker sola than the Georgeville soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat and grass-legume hay; poorly suited to corn and soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.
- The risk of compaction increases when the soil is wet.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- The slope poses safety hazards and creates a potential for erosion during construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and mechanical harvesting and planting equipment.
- The slope restricts the use of equipment for preparing this site for planting and seeding.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: X
Hydric soil: No

16B—Helena loam, 2 to 7 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves
Elevation: 180 to 246 feet
Size and shape of areas: Irregular; 5 to 180 acres

Map Unit Composition

Helena: Typically 75 percent, ranging from about 55 to 95 percent

Typical Profile

Surface layer:
0 to 2 inches—grayish brown loam

Subsurface layer:
2 to 7 inches—pale brown loam

Subsoil:
7 to 16 inches—brownish yellow sandy clay loam; strong brown masses of oxidized iron
16 to 21 inches—pale brown clay loam; yellowish brown masses of oxidized iron
21 to 32 inches—yellowish brown clay; gray iron depletions
32 to 43 inches—brownish yellow clay; gray iron depletions and reddish yellow masses of oxidized iron
43 to 55 inches—very pale brown clay loam; strong brown masses of oxidized iron

Substratum:
55 to 72 inches—light gray sandy clay loam; brownish yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Appling, Faceville, and Georgeville soils, which are well drained; in the higher areas
- Chastain soils, which are poorly drained; on flood plains

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 2.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: High
Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn, soybeans, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- Shrinking and swelling of the soil may crack foundations and basement walls.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: KK
Hydric soil: No

16C—Helena loam, 7 to 15 percent slopes

Setting

Major land resource area: Southern Piedmont (MLRA 136)
Landform: Hills
Position on the landform: Interfluves and side slopes
Elevation: 164 to 246 feet
Size and shape of areas: Long and narrow; 5 to 260 acres

Map Unit Composition

Helena: Typically 70 percent, ranging from about 50 to 90 percent

Typical Profile

Surface layer:
0 to 2 inches—grayish brown loam

Subsurface layer:
2 to 7 inches—pale brown loam

Subsoil:
7 to 16 inches—brownish yellow sandy clay loam; strong brown masses of oxidized iron
16 to 21 inches—pale brown clay loam; yellowish brown masses of oxidized iron
21 to 32 inches—yellowish brown clay; gray iron depletions
32 to 43 inches—brownish yellow clay; gray iron depletions and reddish yellow masses of oxidized iron
43 to 55 inches—very pale brown clay loam; strong brown masses of oxidized iron

Substratum:
55 to 72 inches—light gray sandy clay loam; brownish yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Appling, Faceville, and Georgeville soils, which are well drained; in the higher areas
- Chastain soils, which are poorly drained; on flood plains

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 2.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: High
Runoff class: Medium
Parent material: Clayey residuum

Use and Management Considerations

Cropland
Suitability: Moderately suited to grass-legume hay; poorly suited to corn, soybeans, and wheat
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Poorly suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- Shrinking and swelling of the soil may crack foundations and basement walls.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: KK
Hydric soil: No

17A—Myatt loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Depressions and flood plains
Position on the landform: Dips and treads
Elevation: 82 to 180 feet
Size and shape of areas: Irregular; 5 to 1,900 acres

Map Unit Composition

Myatt and similar soils: Typically 75 percent, ranging from about 65 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—very dark gray loam

Subsurface layer:
5 to 12 inches—light brownish gray sandy loam; olive yellow and light yellowish brown masses of oxidized iron

Subsoil:
12 to 19 inches—gray sandy loam; strong brown and light yellowish brown masses of oxidized iron
19 to 27 inches—gray sandy clay loam; olive yellow and yellowish brown masses of oxidized iron
27 to 39 inches—gray sandy clay loam; strong brown, brownish yellow, and yellowish red masses of oxidized iron
39 to 52 inches—gray sandy clay loam; brownish yellow and strong brown masses of oxidized iron

Substratum:
52 to 58 inches—gray sandy clay loam; brownish yellow and strong brown masses of oxidized iron
58 to 80 inches—gray sandy loam; yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Chewacla soils, which are somewhat poorly drained; on flood plains
- Bibb soils, which are poorly drained and have less clay in the profile than the Myatt soil; on flood plains
- Chastain soils, which are poorly drained and have more clay in the profile than the Myatt soil; on flood plains

Similar components:
- Yemassee soils, which are somewhat poorly drained; in the slightly higher areas

Soil Properties and Qualities

Available water capacity: High (about 9.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Poorly drained
Depth to seasonal high water table: From about 0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, and grass-legume hay
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Poorly suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: Yes

18B—Nansemond sandy loam, 0 to 4 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces, depressions, and drainageways

Position on the landform: Treads, risers, and base slopes
Elevation: 66 to 131 feet
Size and shape of areas: Irregular; 5 to 95 acres

Map Unit Composition

Nansemond: Typically 65 percent, ranging from about 50 to 80 percent

Typical Profile

Surface layer:
0 to 8 inches—brown sandy loam

Subsurface layer:
8 to 12 inches—light yellowish brown sandy loam

Subsoil:
12 to 27 inches—light olive brown sandy loam; light yellowish brown masses of oxidized iron
27 to 42 inches—brownish yellow, light yellowish brown, and light brownish gray sandy loam
42 to 52 inches—gray fine sandy loam; yellowish brown masses of oxidized iron

Substratum:
52 to 70 inches—gray sandy loam; red, yellowish red, and brownish yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Rumford soils, which are well drained; in the higher areas
- Slagle soils, which are moderately well drained and have more clay in the subsoil than the Nansemond soil; in similar areas
- Yemassee soils, which are somewhat poorly drained; in the lower areas and in slight depressions
- Myatt soils, which are poorly drained; in the lower areas and in depressions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 2.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- Seepage increases the risk of groundwater contamination.

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine; moderately suited to yellow-poplar and sweetgum

- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: F
Hydric soil: No

19A—Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Freshwater swamps and flood plains
Position on the landform: Treads
Elevation: 16 to 82 feet
Size and shape of areas: Long and broad; 20 to 1,400 acres

Map Unit Composition

Nawney: Typically 45 percent, ranging from about 30 to 65 percent
Mattan: Typically 35 percent, ranging from about 15 to 50 percent

Typical Profile

Nawney
Surface layer:
0 to 5 inches—very dark gray loam; strong brown masses of oxidized iron
5 to 10 inches—olive gray loam; strong brown masses of oxidized iron

Substratum:
10 to 30 inches—grayish brown loam; strong brown masses of oxidized iron
30 to 35 inches—gray sandy clay loam; reddish brown and dark yellowish brown masses of oxidized iron
35 to 44 inches—gray fine sandy loam; strong brown masses of oxidized iron
44 to 54 inches—gray loamy sand; yellowish brown masses of oxidized iron
54 to 60 inches—dark gray stratified sandy clay loam, clay loam, and silty clay loam

Mattan
Organic layer:
0 to 14 inches—gray muck
14 to 40 inches—very dark grayish brown muck

Substratum:
40 to 48 inches—very dark grayish brown loamy sand
48 to 60 inches—dark gray sandy clay loam

Minor Components

Dissimilar components:
- Chastain and Bibb soils, which are poorly drained; on flood plains of smaller streams

Soil Properties and Qualities

Available water capacity: Nawney—high (about 9.8 inches); Mattan—very high (about 14.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Nawney—poorly drained; Mattan—very poorly drained
Depth to seasonal high water table: Nawney—from about 0 to 0.5 foot; Mattan—at the surface
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: 0 to 2.0 feet
Shrink-swell potential: Nawney—moderate; Mattan—low
Runoff class: Negligible
Parent material: Nawney—loamy alluvium; Mattan—organic and loamy alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited

Pasture
Suitability: Unsuited

Woodland
Suitability: Moderately suited to sweetgum; poorly suited to baldcypress
- Flooding may cause damage to haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.

Building sites
- Flooding and ponding limit these soils for building site development.

Septic tank absorption fields
- Flooding and ponding limit these soils for septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of these soils.
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7w
Virginia soil management group: PP
Hydric soil: Yes

20D—Nevarc and Emporia soils, 10 to 15 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: River terrace escarpments on marine terraces
Position on the landform: Risers and side slopes along rivers, creeks, and drainageways
Elevation: 49 to 197 feet
Size and shape of areas: Long and narrow; 5 to 150 acres

Map Unit Composition

Nevarc: Typically 40 percent, ranging from about 15 to 60 percent
Emporia: Typically 35 percent, ranging from about 10 to 40 percent

Typical Profile

Nevarc
Surface layer:
0 to 2 inches—very dark grayish brown loam

Subsurface layer:
2 to 4 inches—pale brown loam

Subsoil:
4 to 24 inches—yellowish brown clay loam; light gray iron depletions and strong brown masses of oxidized iron
24 to 36 inches—yellowish brown and strong brown sandy clay loam; gray iron depletions
36 to 50 inches—gray sandy clay loam; yellowish brown masses of oxidized iron

Substratum:
50 to 67 inches—brownish yellow fine sandy loam; light gray iron depletions and strong brown masses of oxidized iron
67 to 74 inches—light gray fine sandy loam; light yellowish brown masses of oxidized iron

Emporia
Surface layer:
0 to 6 inches—brown fine sandy loam

Subsurface layer:
6 to 14 inches—light yellowish brown loamy fine sand

Subsoil:
14 to 18 inches—yellowish brown fine sandy loam; light yellowish brown masses of oxidized iron
18 to 41 inches—strong brown sandy clay loam; yellowish red masses of oxidized iron
41 to 54 inches—strong brown sandy clay; light gray iron depletions and yellowish red masses of oxidized iron

Substratum:
54 to 72 inches—light gray, yellowish red, brownish yellow, and strong brown stratified sandy loam to sandy clay loam

Minor Components

Dissimilar components:
- Rumford soils, which are well drained and have less clay in the subsoil than the Nevarc and Emporia soils; in similar areas
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Nevarc soil; in similar areas

Soil Properties and Qualities

Available water capacity: Nevarc—moderate (about 7.1 inches); Emporia—moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Nevarc—moderately low (about 0.06 in/hr); Emporia—moderately high (about 0.20 in/hr)
Drainage class: Nevarc—moderately well drained; Emporia—well drained
Depth to seasonal high water table: Nevarc—from about 1.5 to 3.0 feet; Emporia—from about 3.0 to 4.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Nevarc—moderate; Emporia—low
Runoff class: Medium
Parent material: Nevarc—clayey alluvium and marine deposits; Emporia—loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat; poorly suited to corn, soybeans, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The high clay content of the soil restricts the rooting depth of crops.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine, southern red oak, yellow-poplar, and sweetgum
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of these soils.
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: Nevarc—HH; Emporia—S
Hydric soil: No

20F—Nevarc and Emporia soils, 15 to 50 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: River terrace escarpments on marine terraces
Position on the landform: Risers and side slopes along rivers, creeks, and drainageways
Elevation: 33 to 98 feet
Size and shape of areas: Long and narrow; 5 to 200 acres

Map Unit Composition

Nevarc: Typically 40 percent, ranging from about 15 to 50 percent
Emporia: Typically 35 percent, ranging from about 10 to 45 percent

Typical Profile

Nevarc
Surface layer:
0 to 2 inches—very dark grayish brown loam

Subsurface layer:
2 to 4 inches—pale brown loam

Subsoil:
4 to 24 inches—yellowish brown clay loam; light gray iron depletions and strong brown masses of oxidized iron
24 to 36 inches—yellowish brown and strong brown sandy clay loam; gray iron depletions
36 to 50 inches—gray sandy clay loam; yellowish brown masses of oxidized iron

Substratum:
50 to 67 inches—brownish yellow fine sandy loam; light gray iron depletions and strong brown masses of oxidized iron
67 to 74 inches—light gray fine sandy loam; light yellowish brown masses of oxidized iron

Emporia
Surface layer:
0 to 6 inches—brown fine sandy loam

Subsurface layer:
6 to 14 inches—light yellowish brown loamy fine sand

Subsoil:
14 to 18 inches—yellowish brown fine sandy loam; light yellowish brown masses of oxidized iron
18 to 41 inches—strong brown sandy clay loam; yellowish red masses of oxidized iron
41 to 54 inches—strong brown sandy clay; light gray iron depletions and yellowish red masses of oxidized iron

Substratum:
54 to 72 inches—light gray, yellowish red, brownish yellow, and strong brown stratified sandy loam to sandy clay loam

Minor Components

Dissimilar components:
- Uchee soils, which are well drained and have a thick, sandy surface layer and have less clay in the subsoil than the Nevarc soil; in similar areas
- Rumford soils, which are well drained and have less clay in the subsoil than the Nevarc and Emporia soils; in similar areas
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Nevarc soil; in similar areas

Soil Properties and Qualities

Available water capacity: Nevarc—moderate (about 7.1 inches); Emporia—moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Nevarc—moderately low (about 0.06 in/hr); Emporia—moderately high (about 0.20 in/hr)
Drainage class: Nevarc—moderately well drained; Emporia—well drained
Depth to seasonal high water table: Nevarc—from about 1.5 to 3.0 feet; Emporia—from about 3.0 to 4.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Nevarc—moderate; Emporia—low
Runoff class: High
Parent material: Nevarc—clayey alluvium and marine deposits; Emporia—loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Unsuited

Pasture
Suitability: Unsuited

Woodland
Suitability: Moderately suited to loblolly pine, southern red oak, yellow-poplar, and sweetgum
- The slope poses safety hazards and creates a potential for erosion during construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and mechanical harvesting and planting equipment.
- The slope makes the use of mechanical planting equipment impractical.

- The low strength of the soil interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of these soils.
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Nevarc—HH; Emporia—S
Hydric soil: No

21B—Ocilla loamy sand, 0 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Heads of drainageways on marine terraces
Position on the landform: Head slopes of depressions and drainageways
Elevation: 66 to 246 feet
Size and shape of areas: Irregular; 5 to 250 acres

Map Unit Composition

Ocilla: Typically 75 percent, ranging from about 65 to 85 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loamy sand

Subsurface layer:
4 to 30 inches—pale yellow loamy sand; gray iron depletions

Subsoil:
30 to 42 inches—yellowish brown sandy loam; gray iron depletions and light yellowish brown masses of oxidized iron
42 to 50 inches—light yellowish brown sandy loam; gray iron depletions and strong brown masses of oxidized iron

Substratum:
50 to 58 inches—yellowish brown sandy loam; gray iron depletions
58 to 65 inches—yellowish brown, yellow, and strong brown sandy loam; gray iron depletions

Minor Components

Dissimilar components:
- Uchee soils, which are well drained; in the higher areas
- Altavista soils, which are moderately well drained and do not have a thick, sandy surface layer; in similar areas
- Seabrook soils, which are moderately well drained and have less clay in the subsoil than the Ocilla soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 6.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Somewhat poorly drained
Depth to seasonal high water table: From about 1.0 to 2.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to peanuts, wheat, and grass-legume hay; moderately suited to corn; poorly suited to soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- Seepage increases the risk of groundwater contamination.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Moderately suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: DD
Hydric soil: No

22A—Roanoke loam, 0 to 2 percent slopes, frequently flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Flood plains and low stream terraces
Position on the landform: Nearly level depressions, broad drainageways, and flats
Elevation: 49 to 213 feet
Size and shape of areas: Irregular; 5 to 1,700 acres

Map Unit Composition

Roanoke: Typically 75 percent, ranging from about 70 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—undecomposed hardwood leaf litter and pine needles

Surface layer:
1 to 3 inches—very dark gray loam

Subsurface layer:
3 to 9 inches—olive gray loam; olive yellow masses of oxidized iron

Subsoil:
9 to 18 inches—gray clay; yellowish red masses of oxidized iron
18 to 40 inches—gray clay; red masses of oxidized iron
40 to 50 inches—gray and greenish gray clay; red masses of oxidized iron

Substratum:
50 to 72 inches—light olive gray clay loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Eulonia soils, which are moderately well drained; in the higher areas
- Warne soils, which are somewhat poorly drained; in the slightly higher areas
- Myatt and Tomotley soils, which are poorly drained and have less clay in the subsoil than the Roanoke soil; in the higher flat areas not subject to flooding
- Bibb soils, which are poorly drained and have less clay in the subsoil than the Roanoke soil; on the larger flood plains

- Mattan soils, which are very poorly drained and have an organic surface layer; in swamps

Soil Properties and Qualities

Available water capacity: Moderate (about 8.6 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Drainage class: Poorly drained
Depth to seasonal high water table: From about 0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Parent material: Clayey alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited

Pasture
Suitability: Unsuited

Woodland
Suitability: Well suited to loblolly pine
- Flooding may cause damage to haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- Flooding limits the use of this soil for septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7w
Virginia soil management group: NN
Hydric soil: Yes

23B—Rumford-Uchee complex, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 82 to 180 feet
Size and shape of areas: Irregular; 5 to 90 acres

Map Unit Composition

Rumford: Typically 60 percent, ranging from about 25 to 70 percent
Uchee: Typically 25 percent, ranging from about 10 to 35 percent

Typical Profile

Rumford
Surface layer:
0 to 11 inches—yellowish brown loamy sand

Subsoil:
11 to 25 inches—dark yellowish brown fine sandy loam
25 to 46 inches—yellowish brown fine sandy loam
46 to 55 inches—yellowish brown loamy sand

Substratum:
55 to 70 inches—yellowish brown sand

Uchee
Surface layer:
0 to 6 inches—dark grayish brown loamy fine sand

Subsurface layer:
6 to 34 inches—light yellowish brown loamy sand

Subsoil:
34 to 54 inches—yellowish brown sandy clay loam; very pale brown masses of oxidized iron
54 to 72 inches—yellowish brown sandy clay loam; gray iron depletions and strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- Tarboro soils, which are somewhat excessively drained and have less clay in the subsoil than the Rumford and Uchee soils; on stream terraces
- Slagle soils, which are moderately well drained; in the slightly lower areas
- Ocilla soils, which are moderately well drained; in depressions and drainageways

Soil Properties and Qualities

Available water capacity: Rumford—moderate (about 6.4 inches); Uchee—moderate (about 6.1 inches)
Slowest saturated hydraulic conductivity: Rumford—high (about 1.98 in/hr); Uchee—moderately high (about 0.20 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: Rumford—more than 6.0 feet; Uchee—from about 3.5 to 5.0 feet
Water table kind: Rumford—not applicable; Uchee—perched
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Rumford—low; Uchee—moderate
Runoff class: Rumford—very low; Uchee—low
Parent material: Rumford—loamy and sandy marine deposits; Uchee—loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to peanuts, wheat, and grass-legume hay; moderately suited to corn; poorly suited to soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine and southern red oak
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Rumford—2e; Uchee—3s
Virginia soil management group: DD
Hydric soil: No

24A—Seabrook sand, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Risers

Elevation: 49 to 115 feet
Size and shape of areas: Irregular; 5 to 100 acres

Map Unit Composition

Seabrook: Typically 85 percent, ranging from about 75 to 95 percent

Typical Profile

Surface layer:
0 to 3 inches—very dark grayish brown loamy sand
3 to 8 inches—brown loamy sand

Substratum:
8 to 25 inches—brownish yellow loamy fine sand
25 to 32 inches—light yellowish brown loamy fine sand; light gray iron depletions and brownish yellow masses of oxidized iron
32 to 60 inches—light gray fine sand; brownish yellow masses of oxidized iron

Minor Components

Dissimilar components:
- Tarboro soils, which are somewhat excessively drained; in the higher areas
- Altavista soils, which are moderately well drained; in the slightly higher areas
- Tomotley soils, which are poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Low (about 3.2 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 2.0 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Parent material: Sandy alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to corn and wheat; poorly suited to soybeans and grass-legume hay
- The limited available water capacity may cause plants to suffer from moisture stress.
- Seepage increases the risk of groundwater contamination.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Poorly suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3s
Virginia soil management group: EE
Hydric soil: No

25A—Slagle fine sandy loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 66 to 246 feet
Size and shape of areas: Irregular; 5 to 2,500 acres

Map Unit Composition

Slagle and similar soils: Typically 80 percent, ranging from about 70 to 90 percent

Typical Profile

Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam
23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Emporia soils, which are well drained; in the higher areas

- Rumford soils, which are well drained and have less clay in the subsoil than the Slagle soil; in the lower areas
- Nansemond soils, which are moderately well drained and have less clay in the subsoil than the Slagle soil; in similar areas
- Ocilla soils, which are somewhat poorly drained and have a thick, sandy surface layer; in drainageways
- Yemassee soils, which are somewhat poorly drained; in the slightly lower areas
- Myatt soils, which are poorly drained; in the lower areas

Similar components:
- Eulonia and Craven soils, which are moderately well drained and have more clay in the subsoil than the Slagle soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine; moderately suited to southern red oak, yellow-poplar, and sweetgum
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2w
Virginia soil management group: K
Hydric soil: No

25B—Slagle fine sandy loam, 2 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 66 to 246 feet
Size and shape of areas: Irregular; 5 to 350 acres

Map Unit Composition

Slagle and similar soils: Typically 65 percent, ranging from about 55 to 80 percent

Typical Profile

Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam
23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Emporia soils, which are well drained; in the higher areas
- Nansemond soils, which are moderately well drained and have less clay in the subsoil than the Slagle soil; in similar areas
- Ocilla soils, which are somewhat poorly drained and have a thick, sandy surface layer; in drainageways
- Yemassee soils, which are somewhat poorly drained; in the slightly lower areas
- Myatt soils, which are poorly drained; in the lower areas
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Slagle soil; in the lower areas

Similar components:
- Eulonia and Craven soils, which are moderately well drained and have more clay in the subsoil than the Slagle soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Moderately well drained
Depth to seasonal high water table: From about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to southern red oak, yellow-poplar, and sweetgum
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 2e
Virginia soil management group: K
Hydric soil: No

26A—State sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 33 to 98 feet
Size and shape of areas: Irregular; 5 to 120 acres

Map Unit Composition

State: Typically 80 percent, ranging from about 65 to 90 percent

Typical Profile

Surface layer:
0 to 10 inches—brown fine sandy loam

Subsoil:
10 to 14 inches—yellowish brown sandy clay loam

14 to 40 inches—strong brown sandy clay loam
40 to 50 inches—strong brown sandy clay loam; reddish yellow masses of oxidized iron
50 to 56 inches—brownish yellow and yellowish brown sandy clay loam

Substratum:
56 to 64 inches—yellowish brown and brownish yellow sandy loam
64 to 84 inches—yellow sand

Minor Components

Dissimilar components:
- Bojac soils, which are well drained and have less clay in the subsoil than the State soil; in similar areas
- Tarboro soils, which are somewhat excessively drained and are sandy throughout; in the higher areas

Soil Properties and Qualities

Available water capacity: High (about 9.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: From about 4.0 to 6.6 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to corn, soybeans, peanuts, wheat, and grass-legume hay

Pasture
Suitability: Well suited

Woodland
Suitability: Well suited to loblolly pine, southern red oak, and yellow-poplar
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: Prime farmland in all areas
Land capability class: 1
Virginia soil management group: B
Hydric soil: No

27B—Tarboro loamy sand, 0 to 6 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Risers
Elevation: 33 to 98 feet
Size and shape of areas: Irregular and long and narrow to medium; 5 to 350 acres

Map Unit Composition

Tarboro: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—partially decayed pine and oak litter

Surface layer:
1 to 8 inches—dark brown loamy sand

Substratum:
8 to 35 inches—brownish yellow sand
35 to 56 inches—strong brown sand
56 to 84 inches—strong brown and very pale brown sand

Minor Components

Dissimilar components:
- Bojac soils, which are well drained and have more clay in the subsoil than the Tarboro soil; in similar areas
- Seabrook soils, which are moderately well drained; in the slightly lower areas

Soil Properties and Qualities

Available water capacity: Very low (about 2.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Drainage class: Somewhat excessively drained
Depth to seasonal high water table: More than 6.0 feet
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Parent material: Sandy alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited to wheat; poorly suited to corn, soybeans, peanuts, and grass-legume hay
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Poorly suited

- The slope increases the hazard of erosion, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Poorly suited to loblolly pine

- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

Building sites

- Flooding limits the use of this soil for building site development.

Septic tank absorption fields

- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets

- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: II
Hydric soil: No

28A—Tomotley sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Drainageways and slight depressions on stream terraces
Position on the landform: Treads and base slopes
Elevation: 49 to 197 feet
Size and shape of areas: Irregular; 5 to 1,300 acres

Map Unit Composition

Tomotley: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—very dark grayish brown sandy loam

Subsurface layer:
8 to 12 inches—grayish brown sandy loam; light brownish gray iron depletions and olive yellow masses of oxidized iron

Subsoil:
12 to 35 inches—light brownish gray sandy clay loam; olive yellow masses of oxidized iron
35 to 48 inches—light brownish gray sandy clay loam; olive yellow masses of oxidized iron

48 to 60 inches—light brownish gray sandy loam

Substratum:
60 to 84 inches—gray loamy coarse sand

Minor Components

Dissimilar components:
- Altavista soils, which are moderately well drained; in the higher areas
- Augusta soils, which are somewhat poorly drained; in the slightly higher areas
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Tomotley soil; in similar areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Poorly drained
Depth to seasonal high water table: From about 0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, and grass-legume hay
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Poorly suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine
- The wetness of the soil may limit the use of log trucks.
- This soil is well suited to haul roads and log landings.

Building sites
- Flooding limits the use of this soil for building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: Yes

29B—Uchee loamy sand, 0 to 6 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads
Elevation: 82 to 230 feet
Size and shape of areas: Irregular; 5 to 320 acres

Map Unit Composition

Uchee: Typically 70 percent, ranging from about 60 to 80 percent

Typical Profile

Surface layer:
0 to 6 inches—dark grayish brown loamy fine sand

Subsurface layer:
6 to 34 inches—light yellowish brown loamy sand

Subsoil:
34 to 54 inches—yellowish brown sandy clay loam; very pale brown masses of oxidized iron
54 to 72 inches—yellowish brown sandy clay loam; gray iron depletions and strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- Rumford soils, which are well drained and do not have a clayey lower subsoil or a thick, sandy surface layer; in similar areas
- Emporia soils, which are well drained and do not have a thick, sandy surface layer; in similar areas
- Slagle soils, which are moderately well drained and do not have a thick, sandy surface layer; in slight depressions and adjacent to drainageways
- Eulonia soils, which are moderately well drained and have more clay in the subsoil than the Uchee soil and do not have a thick, sandy surface layer; in slight depressions and adjacent to drainageways
- Ocilla soils, which are somewhat poorly drained; in drainageways
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Uchee soil; in drainageways and on low stream terraces
- Seabrook soils, which are moderately well drained; on stream terraces
- Tarboro soils, which are somewhat excessively drained; on stream terraces

Soil Properties and Qualities

Available water capacity: Moderate (about 6.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Drainage class: Well drained
Depth to seasonal high water table: From about 3.5 to 5.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to peanuts, wheat, and grass-legume hay; moderately suited to corn; poorly suited to soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited
- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- This soil is well suited to haul roads and log landings.
- This soil is well suited to equipment operations.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3s
Virginia soil management group: DD
Hydric soil: No

30C—Uchee-Slagle complex, 6 to 10 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces
Position on the landform: Treads and risers
Elevation: 66 to 230 feet
Size and shape of areas: Long and narrow; 5 to 250 acres

Map Unit Composition

Uchee: Typically 50 percent, ranging from about 20 to 80 percent
Slagle: Typically 20 percent, ranging from about 15 to 45 percent

Typical Profile

Uchee
Surface layer:
0 to 6 inches—dark grayish brown loamy fine sand

Subsurface layer:
6 to 34 inches—light yellowish brown loamy sand

Subsoil:
34 to 54 inches—yellowish brown sandy clay loam; very pale brown masses of oxidized iron
54 to 72 inches—yellowish brown sandy clay loam; gray iron depletions and strong brown masses of oxidized iron

Slagle
Surface layer:
0 to 8 inches—dark yellowish brown fine sandy loam

Subsoil:
8 to 23 inches—brown fine sandy loam
23 to 41 inches—brown sandy clay loam; pinkish gray and pale brown iron depletions and yellowish red masses of oxidized iron
41 to 55 inches—strong brown, brownish yellow, and light gray sandy clay loam; reddish brown masses of oxidized iron

Substratum:
55 to 70 inches—brownish yellow, light gray, and brown sandy loam; yellowish red masses of oxidized iron

Minor Components

Dissimilar components:
- Tarboro soils, which are somewhat excessively drained and are sandy throughout; in similar areas
- Rumford soils, which are well drained and do not have a clayey lower subsoil; in similar areas
- Ocilla soils, which are somewhat poorly drained; in drainageways

Soil Properties and Qualities

Available water capacity: Uchee—moderate (about 6.1 inches); Slagle—moderate (about 9.0 inches)
Slowest saturated hydraulic conductivity: Uchee—moderately high (about 0.20 in/hr); Slagle—moderately low (about 0.06 in/hr)
Drainage class: Uchee—well drained; Slagle—moderately well drained
Depth to seasonal high water table: Uchee—from about 3.5 to 5.0 feet; Slagle—from about 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Uchee—moderate; Slagle—low
Runoff class: Medium
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Moderately suited to peanuts, wheat, and grass-legume hay; poorly suited to corn and soybeans
- The slope increases surface runoff, the hazard of erosion, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited

- The slope increases the hazard of erosion, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- These soils are well suited to haul roads and log landings.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the Slagle soil limits the absorption and proper treatment of the effluent from conventional septic systems.
- Seepage in the Uchee soil limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- Shrinking and swelling restrict the use of these soils as base material for local roads and streets.
- The low strength of the soil may cause structural damage to local roads and streets.
- Designing local roads and streets is difficult because of the slope.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Uchee—4s; Slagle—3e
Virginia soil management group: Uchee—DD; Slagle—K
Hydric soil: No

31—Udorthents, 0 to 25 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces, stream terraces, and flood plains
Position on the landform: Areas that have been excavated and filled with disturbed soil material, rock, and other debris
Elevation: 33 to 197 feet

Map Unit Composition

Udorthents: Typically 70 percent, ranging from about 50 to 90 percent

Typical Profile

Udorthents in Sussex County have resulted from disturbance of the soil by land leveling, excavating, and filling. Udorthents consist of sandy, loamy, and clayey soil material and varying amounts of rock fragments. Areas range from severely compacted to slightly compacted. Drainage is variable.

32A—Warne fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Stream terraces
Position on the landform: Treads
Elevation: 33 to 197 feet
Size and shape of areas: Irregular; 5 to 250 acres

Map Unit Composition

Warne: Typically 75 percent, ranging from about 60 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark brown fine sandy loam

Subsurface layer:
5 to 11 inches—pale brown sandy loam; grayish brown iron depletions

Subsoil:
11 to 19 inches—light brownish gray clay; brownish yellow masses of oxidized iron
19 to 38 inches—light brownish gray clay

Substratum:
38 to 48 inches—grayish brown loamy sand
48 to 62 inches—grayish brown loamy coarse sand

Minor Components

Dissimilar components:
- Augusta soils, which are somewhat poorly drained and have less clay in the subsoil than the Warne soil; in similar areas
- Dogue soils, which are moderately well drained; in the slightly higher areas
- Roanoke soils, which are poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Drainage class: Somewhat poorly drained
Depth to seasonal high water table: From about 0.5 to 1.5 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Parent material: Clayey alluvium

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, and grass-legume hay
- The high clay content of the soil restricts the rooting depth of crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture

Suitability: Poorly suited

- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland

Suitability: Well suited to loblolly pine; moderately suited to sweetgum

- The wetness of the soil may limit the use of log trucks.
- The low strength of the soil interferes with the construction of haul roads and log landings.
- The low strength of the soil may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites

- Flooding limits the use of this soil for building site development.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted movement of water through the soil limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of this soil as base material for local roads and streets.
- The low strength of the soil is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: No

33A—Yemassee fine sandy loam, 0 to 2 percent slopes

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A)
Landform: Marine terraces and depressions
Position on the landform: Head slopes and depressions
Elevation: 98 to 213 feet
Size and shape of areas: Irregular; 5 to 1,700 acres

Map Unit Composition

Yemassee: Typically 70 percent, ranging from about 65 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—grayish brown fine sandy loam

Subsurface layer:
4 to 15 inches—pale brown fine sandy loam; strong brown and yellowish brown masses of oxidized iron

Subsoil:
15 to 40 inches—light brownish gray sandy clay loam; strong brown and yellowish brown masses of oxidized iron
40 to 60 inches—gray sandy loam; yellowish brown, red, and strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- Slagle soils, which are moderately well drained; in the slightly higher areas
- Myatt soils, which are poorly drained; in the lower areas

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Drainage class: Somewhat poorly drained
Depth to seasonal high water table: From about 1.0 to 1.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn, soybeans, wheat, and grass-legume hay
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Poorly suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine and yellow-poplar; moderately suited to sweetgum
- The wetness of the soil may limit the use of log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: No

W—Water

Setting

Major land resource area: Southern Coastal Plain (MLRA 133A) and Southern Piedmont (MLRA 136)

Typical Profile

This map unit includes ponds, lakes, reservoirs, and streams. It is not assigned any interpretive groups.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The titles of the tables described in this section are:

- "Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part I"
- "Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part II"

The average yields per acre shown in the yields tables in this survey are those that can be expected of the principal crops under a high level of management. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the tables.

The yields are based on the Virginia Agronomic Land Use Evaluation System, or VALUES (Virginia Polytechnic Institute and State University, 1994). Available yield data from nearby counties and results of field trials and demonstrations also are considered.

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

Realistic yield goals can be maintained over a long-term basis through proper nutrient management and other soil amendments, such as lime. Applications of nitrogen and phosphorus from organic and inorganic forms should be used according to approved nutrient management practices and regulations.

Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

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

Effective pasture management practices include maintaining a mixture of grasses and legumes, rotating pasture, deferring grazing, controlling undesirable vegetation, and using proper stocking rates.

Crops other than those shown in the yields tables are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

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

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in the yields tables.

Virginia Soil Management Groups

The Virginia Agronomic Land Use Evaluation System (VALUES) is a system to rank soils for management and productivity (Virginia Polytechnic Institute and State University, 1994). VALUES places each soil series in Virginia into one of 43 management groups. The management groups, A through QQ, include the following soil characteristics: regional occurrence; parent material; landscape position or influence; solum thickness; dominant profile features, such as texture; available water capacity for plants; and internal soil drainage. Economically and environmentally feasible yields were assigned to each management group based on yields of field trial crop data and research. The following paragraphs describe the soil management groups in Sussex County.

Group B. The soils of this group formed in alluvium and are on nearly level or gently sloping flood plains or stream terraces in the Coastal Plain region. These soils are very deep, have a loamy texture throughout, have a high available water capacity, and are well drained or moderately well drained.

Group F. The soils of this group formed in coarse-textured coastal plain sediments and are in low-lying landscape positions underlain by stratified loamy sediments. These soils are very deep, have a coarse-loamy texture throughout, have a moderate or high available water capacity, and are somewhat poorly drained.

Group I. The soils of this group formed in alluvium along flood plains in the Coastal Plain and Piedmont provinces and are somewhat prone to flooding. These soils are deep, have a predominantly clay loam subsurface layer, are moderately high water suppliers, and are somewhat poorly drained.

Group K. The soils of this group formed in mixed marine and fluvial sediments in the Coastal Plain and are on landscapes that range from stream terraces to broad, nearly level interfluves on uplands. These soils are very deep, have a loamy surface layer and a clay loam to clayey subsurface layer, have a moderate available water capacity, and are somewhat poorly drained.

Group R. The soils of this group formed in marine sediments in the Coastal Plain on gently sloping uplands. These soils are very deep, have a sandy loam surface layer and a reddish yellow clay loam to clay subsurface layer, may have redoximorphic features in the lower part of the subsoil, have a moderate available water capacity, and are well drained or moderately well drained.

Group S. The soils of this group formed in loamy coastal plain sediments on gently sloping uplands. These soils are very deep, have a fine-loamy subsurface layer, have a moderate to high available water capacity, and are well drained or moderately well drained.

Group V. The soils of this group formed in saprolites derived from a variety of parent materials, including slates, granites, gneisses, schists, and more basic granitic rocks. These soils have a clayey subsurface layer, are moderate water suppliers, and are well drained.

Group X. The soils of this group formed in a variety of residual materials, including slates, granites, gneisses, and schists. These soils have a clayey subsurface layer, which sometimes contain coarse fragments or gravel, are moderate water suppliers, and are well drained or moderately well drained.

Group Z. The soils of this group formed in alluvial or colluvial sediments and are on low terraces. These soils are very deep, have a clayey subsurface layer, have a moderate available water capacity, and are well drained or moderately well drained.

Group DD. The soils of this group formed in loamy coastal plain sediments and local alluvium and are on gently sloping uplands and stream terraces. These soils are very deep, have a coarse-loamy subsurface layer, have an arenic or a very thick sandy surface in some soils, have a low or moderate available water capacity, and are excessively drained.

Group EE. The soils of this group formed in loamy coastal plain sediments and are in low-lying landscape positions. These soils are very deep, have a sandy to coarse-loamy subsurface layer, have water tables that usually are high during some part of the year, have a low available water capacity, and are poorly drained or very poorly drained.

Group HH. The soils of this group formed in loamy alluvial sediments and are on flood plains. These soils are very deep, have a fine-loamy or clayey subsurface layer, have a moderate available water capacity, and are moderately well drained or somewhat poorly drained.

Group II. The soils of this group formed in sandy coastal plain sediments. These soils are very deep, have sandy layers throughout, have a very low or low available water capacity, and are excessively drained to moderately well drained.

Group KK. The soils of this group formed in a variety of residual materials, including Triassic sediments, residuum from basic rocks, and other clayey sediments. These soils are moderately deep, have a clayey subsurface layer, commonly have large components of high shrink-swell clays, are moderate water suppliers, and are moderately well drained or somewhat poorly drained.

Group LL. The soils of this group formed in clayey coastal plain sediments on low-lying landscapes. These soils are very deep, have clayey subsurface layers throughout, have a moderate available water capacity, and are somewhat poorly drained or poorly drained.

Group NN. The soils of this group formed in alluvium along streams or on terraces. These soils are moderately deep, have a silty to clay loam subsurface texture, are moderately high water suppliers, and are somewhat poorly drained or poorly drained.

Group OO. The soils of this group formed in loamy and silty coastal plain sediments on terraces and broad, nearly level uplands. These soils are very deep, have loamy to silty layers throughout, have a high available water capacity, and are poorly drained.

Group PP. The soils of this group formed in alluvium in marshes and tidal wetlands. These soils are very deep, have a combination of organic, clayey, or sulfidic material layers, have a water table at or near the soil surface, are saturated most of the time, and are poorly drained or very poorly drained.

The management groups for the map units in Sussex County are given in the section “Detailed Soil Map Units” and in the yields tables.

Prime Farmland and Other Important Farmlands

The table “Prime Farmland” lists the map units in the survey area that are considered prime farmland. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation’s food supply.

Prime farmland is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 175,550 acres in Sussex County, or nearly 56 percent of the total acreage, meets the requirements for prime farmland. A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

For some soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

Hydric Soils

The table described in this section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the table contain at least one component that meets the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

3A Augusta sandy loam, 0 to 2 percent slopes, rarely flooded
8A Chewacla loam, 0 to 2 percent slopes, occasionally flooded
9B Craven loam, 2 to 6 percent slopes
11A Dogue loam, 0 to 2 percent slopes
11B Dogue loam, 2 to 6 percent slopes
12B Emporia-Slagle complex, 2 to 6 percent slopes
12C Emporia-Slagle complex, 6 to 10 percent slopes
13A Eulonia fine sandy loam, 0 to 2 percent slopes
13B Eulonia fine sandy loam, 2 to 6 percent slopes
15D Georgeville silt loam, 15 to 25 percent slopes
16B Helena loam, 2 to 7 percent slopes
16C Helena loam, 7 to 15 percent slopes
18B Nansemond sandy loam, 0 to 4 percent slopes
24A Seabrook sand, 0 to 2 percent slopes
25A Slagle fine sandy loam, 0 to 2 percent slopes
25B Slagle fine sandy loam, 2 to 6 percent slopes
29B Uchee loamy sand, 0 to 6 percent slopes
32A Warne fine sandy loam, 0 to 2 percent slopes, rarely flooded
33A Yemassee fine sandy loam, 0 to 2 percent slopes

Agricultural Waste Management

The titles of the tables described in this section are:

- "Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge"
- "Agricultural Disposal of Wastewater by Irrigation and Overland Flow"
- "Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment"

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The tables described in this section show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (Ksat), slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Saturated hydraulic conductivity (Ksat) and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (Ksat), depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Forestland Productivity and Management

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

In the table, "Forestland Productivity," the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume 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. Commonly grown trees are those that forest 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 *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

The titles of the tables described in this section are:

- "Haul Roads, Log Landings, and Soil Rutting on Forestland"
- "Hazard of Erosion and Suitability for Roads on Forestland"
- "Forestland Planting and Harvesting"
- "Forestland Site Preparation"
- "Damage by Fire and Seedling Mortality on Forestland"

In these tables, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Proper planning for timber harvesting is essential to minimize the potential impact to soil and water quality. A harvest plan should include logging roads, log decks, streamside management zones, stream crossings, skid trails, a schedule of activities, and best management practices (BMPs) for each activity. Forests should be managed to increase economic and environmental benefits. A forest stewardship plan should be developed to guide management and utilization of the woodlands.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erosion factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreational Development

The titles of the tables described in this section are:

- “Camp Areas, Picnic Areas, and Playgrounds”
- “Paths, Trails, and Golf Fairways”

In the tables described in this section, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, saturated hydraulic conductivity (Ksat), corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

The titles of the tables described in this section are:

- "Dwellings and Small Commercial Buildings"
- "Roads and Streets, Shallow Excavations, and Lawns and Landscaping"

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. The tables described in this section show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

The titles of the tables described in this section are:

- "Sewage Disposal"
- "Landfills"

These tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include saturated hydraulic conductivity (Ksat), depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If the downward movement of water through the soil profile is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

The titles of the tables described in this section are:

- “Source of Gravel and Sand”
- “Source of Reclamation Material, Roadfill, and Topsoil”

These tables give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table “Source of Sand and Gravel,” only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In the table “Source of Reclamation Material, Roadfill, and Topsoil,” the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

The table “Ponds and Embankments” gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the saturated hydraulic conductivity (Ksat) of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

The table described in this section gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

The table described in this section shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ability of a soil to transmit water or air. The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. 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 Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

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

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Soil Properties

The table described in this section shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Water Features

The table described in this section gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

The table described in this section gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2006). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludults.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, siliceous, subactive, thermic Typic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

The table “Taxonomic Classification of the Soils” indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2006). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Altavista Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Loamy alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 6 percent

Associated Soils

- State soils, which are well drained
- Bojac and Tarboro soils, which are well drained and have less clay in the subsoil than the Altavista soils
- Augusta soils, which are somewhat poorly drained
- Tomotley soils, which are poorly drained
- Seabrook soils, which have less clay in the subsoil than the Altavista soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, thermic Aquic Hapludults

Typical Pedon

Altavista fine sandy loam; located 1.9 miles north of the junction of Highways VA-731 and VA-749, about 1.6 miles south-southeast of the junction of Highways US-58 and VA-675, about 0.6 mile east-southeast of the junction of Highways VA-675 and VA-731, in cropland; elevation 37 feet; Courtland, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 41 minutes 12.00 seconds N. and long. 77 degrees 04 minutes 37.00 seconds W.

Ap—0 to 11 inches; brown (10YR 5/3) fine sandy loam; weak medium granular structure; very friable, nonsticky, nonplastic; common fine roots; neutral; abrupt smooth boundary.

Bt1—11 to 19 inches; light yellowish brown (10YR 6/4) loam; weak fine and medium subangular blocky structure; friable, nonsticky, slightly plastic; few very fine and fine roots; few faint clay films on all faces of peds; slightly acid; clear smooth boundary.

Bt2—19 to 26 inches; yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; common faint clay films on all faces of peds; strongly acid; clear smooth boundary.

Bt3—26 to 38 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few faint clay films on all faces of peds; common medium distinct irregular light gray (10YR 7/2) iron depletions and common fine prominent brownish yellow (10YR 6/6) masses of oxidized iron; few fine flakes of mica; strongly acid; gradual wavy boundary.

Cg—38 to 51 inches; light gray (10YR 7/2) sandy clay loam; massive; friable, slightly sticky, slightly plastic; common fine prominent brownish yellow (10YR 6/6) and many fine prominent yellowish red (5YR 5/8) masses of oxidized iron; few fine flakes of mica; very strongly acid; thin strata of sandy loam; gradual wavy boundary.

C—51 to 72 inches; brownish yellow (10YR 6/6) sandy loam; massive; very friable, nonsticky, nonplastic; many medium distinct light gray (10YR 7/2) iron depletions; few fine flakes of mica; very strongly acid; thin strata of sandy clay loam.

Range in Characteristics

Solum thickness: 30 to 60 inches or more
Rock fragments: 0 to 5 percent in the A, E, Bt, Btg, and BC horizons; 0 to 15 percent in the C horizon
Soil reaction: Extremely acid to moderately acid, except where lime has been applied
Mica flakes: Few or common in the Bt, BC, C, and Cg horizons of most pedons

A or Ap horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 8
Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray within the upper 24 inches of the Bt horizon; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam, sandy clay loam, or clay loam

Btg horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray within the upper 24 inches of the Bt horizon; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam, clay loam, or sandy clay loam

BC horizon (where present):
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—loamy sand, sandy loam, fine sandy loam, loam, or sandy clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8

Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand, loamy sand, sandy loam, or sandy clay loam

Cg horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand, loamy sand, sandy loam, or sandy clay loam

Appling Series

Major land resource area: Southern Piedmont
Landform: Hills
Parent material: Clayey residuum from acid crystalline rocks
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 2 to 15 percent

Associated Soils

- Helena soils, which are moderately well drained
- Roanoke soils, which are poorly drained
- Georgeville soils, which have redder colors and have more silt in the subsoil than the Appling soils
- Faceville soils, which are on stream terraces

Taxonomic Classification

Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Appling sandy loam; located 0.8 mile northeast of the junction of Highways VA-623 and VA-750, about 980 feet northwest of Highway VA-750, about 100 feet from the northeast corner of power line tower, in cropland; elevation 220 feet; Sutherland, VA, 7.5-minute USGS topographic quadrangle; Dinwiddie County, Virginia; NAD27; lat. 37 degrees 13 minutes 45.00 seconds N. and long. 77 degrees 34 minutes 37.00 seconds W.

Ap—0 to 7 inches; olive brown (2.5Y 4/4) sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine, medium, and coarse roots; very strongly acid; clear wavy boundary.
E—7 to 11 inches; brownish yellow (10YR 6/6) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; common fine and medium roots; 5 percent angular quartz gravel; very strongly acid; clear wavy boundary.
Bt1—11 to 16 inches; brownish yellow (10YR 6/8) sandy clay loam; moderate medium subangular blocky structure; firm, moderately sticky, slightly plastic; few fine and medium roots; 5 percent angular quartz gravel; strongly acid; clear smooth boundary.
Bt2—16 to 33 inches; brownish yellow (10YR 6/8) clay; common medium distinct red (2.5YR 5/8) mottles; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium roots; few faint clay films on all faces of peds; few fine flakes of mica; 5 percent angular quartz gravel; strongly acid; gradual smooth boundary.

BC—33 to 43 inches; brownish yellow (10YR 6/8) sandy clay loam; many medium distinct red (2.5YR 5/8) mottles; weak medium subangular blocky structure; firm, moderately sticky, slightly plastic; few fine and medium roots; few faint clay films on surfaces along root channels and on all faces of peds; few fine flakes of mica; strongly acid; gradual smooth boundary.

C—43 to 72 inches; yellowish red (5YR 4/6) sandy loam; massive; friable, slightly sticky, nonplastic; few faint clay films on all faces of peds; few fine flakes of mica; strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Depth to bedrock: More than 60 inches
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Rock fragments: 0 to 15 percent in the A, Ap, and E horizons; 0 to 10 percent in the Bt and BC horizons; 0 to 15 percent in the C horizon
Mica flakes: None to common in the A, Ap, E, and Bt horizons; few to many in the BC and C horizons

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 or 4
Chroma—2 to 4
Texture—coarse sandy loam, sandy loam, or fine sandy loam

E horizon:
Hue—5YR to 10YR
Value—5 or 6
Chroma—4 or 6
Texture—coarse sandy loam, sandy loam, or fine sandy loam

BA or BE horizon (where present):
Hue—5YR to 10YR
Value—5 or 6
Chroma—3 to 8
Texture—sandy loam or sandy clay loam

Bt horizon:
Hue—5YR to 2.5Y
Value—5 or 6
Chroma—6 or 8
Mottles—shades of brown, yellow, and red in the lower part of the Bt horizon
Texture—clay loam, sandy clay, or clay; thin subhorizons of sandy clay loam in some pedons

BC horizon:
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—6 or 8
Mottles—shades of brown, yellow, and red
Texture—sandy clay loam or clay loam

C horizon:
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—6 or 8
Mottles—shades of brown, yellow, and red
Texture—sandy loam, loam, or sandy clay loam

Augusta Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces and drainageways
Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Altavista soils, which are moderately well drained
- State soils, which are well drained
- Tomotley soils, which are poorly drained
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Augusta soils
- Warne soils, which have more clay in the subsoil than the Augusta soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, thermic Aeric Endoaquults

Typical Pedon

Augusta sandy loam; located 2.2 miles northwest of the junction of Highways VA-35 and VA-647, about 1.4 miles southwest of the junction of Highways VA-35 and VA-628, about 0.8 mile northeast of Vicks Island on the Nottoway River, 90 feet southwest of VA-647, in wooded area; elevation 41 feet; Vicksville, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 45 minutes 21.00 seconds N. and long. 77 degrees 06 minutes 40.00 seconds W.

Oi—0 to 3 inches; partially decayed pine and oak litter.

A—3 to 6 inches; brown (10YR 5/3) sandy loam; moderate medium granular structure; friable, nonsticky, nonplastic; many fine and medium roots; common fine moderate-continuity interstitial pores; very strongly acid; clear smooth boundary.

E—6 to 11 inches; light yellowish brown (2.5Y 6/4) sandy loam; moderate medium and coarse subangular blocky structure; friable, nonsticky, nonplastic; many fine and medium roots; many very fine moderate-continuity interstitial pores; many medium distinct light brownish gray (2.5Y 6/2) iron depletions and many medium distinct olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Bt—11 to 26 inches; light yellowish brown (2.5Y 6/3) sandy clay loam; moderate coarse subangular blocky structure; firm, slightly sticky, slightly plastic; many fine roots between peds; common fine moderate-continuity interstitial pores; common distinct continuous clay films on all faces of peds; common medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

Btg1—26 to 36 inches; grayish brown (2.5Y 5/2) sandy clay loam; moderate coarse subangular blocky structure; firm, slightly sticky, slightly plastic; few medium and common very fine roots; common fine moderate-continuity interstitial pores; common distinct continuous clay films on all faces of peds; common medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

Btg2—36 to 46 inches; light gray (2.5Y 7/1) sandy clay loam; moderate coarse subangular blocky structure; firm, slightly sticky, slightly plastic; common fine moderate-continuity interstitial pores; common distinct continuous clay films on all faces of peds; common medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

Cg1—46 to 54 inches; white (2.5Y 8/1) sandy loam; massive; friable, nonsticky, nonplastic; very strongly acid; clear smooth boundary.

Cg2—54 to 65 inches; white (2.5Y 8/1) sand; single grain; loose, nonsticky, nonplastic; common medium faint light brownish gray (2.5Y 6/2) iron depletions and many medium distinct pale yellow (2.5Y 7/4) masses of oxidized iron; very strongly acid; clear smooth boundary.

C—65 to 84 inches; brownish yellow (10YR 6/8) sand; single grain; loose, nonsticky, nonplastic; many medium prominent white (2.5Y 8/1) iron depletions and common medium distinct pale yellow (2.5Y 7/4) masses of oxidized iron; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 80 inches

Rock fragments: 0 to 10 percent in the A, E, Bt, Btg, and BC horizons; 0 to 20 percent in the C and Cg horizons

Soil reaction: Very strongly acid to moderately acid, except where lime has been applied

A or Ap horizon:

Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 6
Texture—sandy loam, fine sandy loam, or loam

E horizon:

Hue—10YR to 5Y
Value—5 to 7
Chroma—2 to 4
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, or loam

Bt horizon:

Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 6
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam, sandy clay loam, or clay loam

Btg horizon:

Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam, sandy clay loam, or clay loam

BCg horizon (where present):

Hue—10YR to 5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, sandy clay loam, or clay loam

Cg horizon:

Hue—10YR to 5Y

Value—5 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sand, loamy sand, loamy fine sand, or sandy loam

C horizon:
Hue—10YR to 5Y
Value—3 to 8
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and yellow; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sand, loamy sand, loamy fine sand, or sandy loam

Bibb Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Chastain soils, which are poorly drained and have more clay in the subsoil than the Bibb soils
- Nawney soils, which have more clay in the profile than the Bibb soils
- Myatt soils, which have more clay in the subsoil than the Bibb soils
- Chewacla soils, which are somewhat poorly drained and have more clay in the subsoil than the Bibb soils

Taxonomic Classification

Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

Typical Pedon

Bibb fine sandy loam; located in the Town of Claremont, 0.8 mile southeast of Claremont Manor, 0.4 mile north-northeast of the junction of Highways VA-609 and VA-613, northwest of Protestant Cemetery, in a stand of mixed hardwoods; elevation 5 feet; Claremont, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 13 minutes 59.00 seconds N. and long. 76 degrees 57 minutes 52.00 seconds W.

Ag—0 to 16 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; friable, slightly sticky, slightly plastic; very strongly acid; gradual smooth boundary.
Cg1—16 to 25 inches; gray (10YR 6/1) sand; single grain; loose, nonsticky, nonplastic; 10 percent rounded quartz gravel; very strongly acid; clear smooth boundary.
Cg2—25 to 40 inches; olive gray (5Y 5/2) fine sandy loam; massive; friable, slightly sticky, slightly plastic; very strongly acid; abrupt smooth boundary.
Cg3—40 to 50 inches; very dark gray (5Y 3/1) loam; massive; friable, slightly sticky, slightly plastic; very strongly acid; abrupt smooth boundary.
Cg4—50 to 55 inches; dark gray (5Y 4/1) gravelly sand; single grain; loose, nonsticky, nonplastic; 20 percent rounded quartz gravel; very strongly acid; abrupt smooth boundary.

Cg5—55 to 70 inches; very dark gray (5Y 3/1) fine sandy loam; massive; very strongly acid.

Range in Characteristics

Soil reaction: Very strongly acid or strongly acid
Rock fragments: 0 to 10 percent gravel throughout, but may range up to 35 percent

A horizon (where present):
Hue—10YR
Value—2 to 5
Chroma—1 to 3
Texture—sand, loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Ag horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 3 to 7
Value—3 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive; masses of oxidized iron in shades of brown and yellow
Texture—sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, loam, or silt loam

Cg horizon:
Hue—10YR to 5BG; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive; masses of oxidized iron in shades of brown, yellow, and gray
Texture—sandy loam, fine sandy loam, loam, or silt loam; stratified in the upper Cg horizon and sand, loamy sand, or loamy fine sand or thin strata of gravel and/or organic matter in the lower Cg horizon in some pedons

Bojac Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Stream terraces
Parent material: Coarse-loamy alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Slope range: 0 to 2 percent

Associated Soils

- Tarboro soils, which are somewhat excessively drained and have less clay in the subsoil than the Bojac soils
- State soils, which have more clay in the subsoil than the Bojac soils
- Seabrook soils, which are moderately well drained
- Altavista soils, which are moderately well drained and have more clay in the subsoil than the Bojac soils
- Augusta soils, which are somewhat poorly drained and have more clay in the subsoil than the Bojac soils
- Tomotley soils, which are poorly drained and have more clay in the subsoil than the Bojac soils

Taxonomic Classification

Coarse-loamy, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

Bojac loamy sand; located 4.3 miles south of Franklin, 1.1 miles north-northwest of the junction of Highways US-258 and VA-189, about 0.3 mile southwest of the junction of Highways US-258 and VA-690, at edge of field in cropland; elevation 27 feet; Franklin, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 37 minutes 32.00 seconds N. and long. 76 degrees 56 minutes 8.00 seconds W.

Ap—0 to 13 inches; light olive brown (2.5Y 5/4) loamy sand; weak medium granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; few fine prominent black (10YR 2/1) manganese coatings that have diffuse boundaries; slightly acid; abrupt smooth boundary.

Bt1—13 to 30 inches; yellowish brown (10YR 5/8) sandy loam; moderate medium and coarse subangular blocky structure; friable, nonsticky, nonplastic; common very fine, fine, and medium and few coarse roots; many very fine and fine high-continuity tubular and many fine and medium moderate-continuity interstitial pores; common faint discontinuous light olive brown (2.5Y 5/6) clay bridges between sand grains; few fine prominent black (10YR 2/1) manganese coatings that have diffuse boundaries; few fine and medium faint dark yellowish brown (10YR 4/6) and brownish yellow (10YR 6/6) masses of oxidized iron; few fine flakes of mica; strongly acid; clear smooth boundary.

Bt2—30 to 37 inches; yellowish brown (10YR 5/6) sandy loam; moderate medium subangular blocky structure; friable, nonsticky, nonplastic; common very fine and fine roots; few fine high-continuity tubular and common very fine and fine moderate-continuity interstitial pores; common faint discontinuous brownish yellow (10YR 6/6) clay bridges between sand grains; few fine flakes of mica; 2 percent rounded quartz gravel; strongly acid; clear smooth boundary.

Bt3—37 to 48 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; very friable, nonsticky, nonplastic; few very fine and fine roots; common very fine and fine moderate-continuity interstitial and common very fine and fine high-continuity tubular pores; few faint patchy strong brown (7.5YR 5/8) clay bridges between sand grains; common fine and medium faint strong brown (7.5YR 5/8) masses of oxidized iron; few fine flakes of mica; 2 percent rounded quartz gravel; strongly acid; few fine prominent white (10YR 8/1) clean sand grains; clear smooth boundary.

C—48 to 66 inches; yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) sand; single grain; loose, nonsticky, nonplastic; common fine and medium prominent white (10YR 8/1) iron depletions; common fine flakes of mica; 5 percent rounded quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 30 to 65 inches
Soil reaction: Extremely acid to slightly acid, except where lime has been applied
Rock fragments: 0 to 35 percent in the A, E, Bt, and BC horizons; 0 to 50 percent in the C horizon
Mica content: Few to common in the B and C horizons of most pedons

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 to 4
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—4 or 6
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BA or BE horizon (where present):
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of olive and gray below 40 inches; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam; thin subhorizon of sandy clay loam in some pedons

BC horizon (where present):
Hue—7.5 YR or 10YR
Value—4 to 6
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—loamy sand or loamy fine sand

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sand, loamy sand, or loamy fine sand

Buncombe Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Sandy alluvium
Drainage class: Excessively drained
Slowest saturated hydraulic conductivity: High
Slope range: 0 to 2 percent

Associated Soils

- Chewacla soils, which are somewhat poorly drained and have more clay in the subsoil than the Buncombe soils
- Chastain and Bibb soils, which are poorly drained, are frequently flooded, and have more clay in the profile than the Buncombe soils
- Tarboro soils, which are somewhat excessively drained

Taxonomic Classification

Mixed, thermic Typic Udipsamments

Typical Pedon

Buncombe loamy sand; located 1.6 miles northeast of the junction of Highways VA-672 and VA-684, about 1.3 miles southeast of the junction of Highways VA-659 and VA-671, about 0.5 mile west-northwest of the junction of Highways VA-684 and VA-687, about 240 feet east of Nottoway River, in woodland; elevation 8 feet; Franklin, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 38 minutes 11.00 seconds N. and long. 76 degrees 59 minutes 28.00 seconds W.

Oi—0 to 2 inches; partially decayed pine and oak litter.
A—2 to 7 inches; very dark grayish brown (2.5Y 3/2) loamy sand; moderate medium granular structure; very friable, nonsticky, nonplastic; many fine and medium roots; very strongly acid; clear smooth boundary.
C1—7 to 38 inches; olive yellow (2.5Y 6/6) loamy sand; single grain; loose, nonsticky, nonplastic; common fine and medium roots; very strongly acid; gradual smooth boundary.
C2—38 to 58 inches; pale yellow (2.5Y 7/4) sand; single grain; loose, nonsticky, nonplastic; very strongly acid; gradual smooth boundary.
C3—58 to 84 inches; olive yellow (2.5Y 6/6) gravelly sand; single grain; loose, nonsticky, nonplastic; 20 percent rounded quartz gravel; very strongly acid.

Range in Characteristics

Soil reaction: Very strongly acid to slightly acid
Rock fragments: 0 to 35 percent pebbles, gravel, and cobbles in the C horizon below 40 inches

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—2 to 6
Texture—sand, loamy sand, or loamy fine sand

Bw horizon (where present):
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Texture—sand, loamy sand, or loamy fine sand

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 8
Chroma—3 to 8
Mottles—shades of gray and white
Texture (fine-earth fraction)—sand, fine sand, loamy sand, or loamy fine sand in the upper C horizon; gravelly sand to loam with strata of gravel or cobbles in the lower C horizon

Chastain Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flood plains
Parent material: Clayey alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 0 to 2 percent

Associated Soils

- Buncombe soils, which are excessively drained and have less clay in the subsoil than the Chastain soils
- Chewacla soils, which are somewhat poorly drained and have less clay in the subsoil than the Chastain soils
- Tomotley soils, which are poorly drained, have less clay in the subsoil than the Chastain soils, and are on stream terraces
- Roanoke soils, which are poorly drained and are on stream terraces
- Bibb soils, which are poorly drained, have less clay in the profile than the Chastain soils, and are in drainageways and on flood plains

Taxonomic Classification

Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts

Typical Pedon

Chastain loam; located 0.9 mile west of Courtland, 0.3 mile north-northwest of the junction of Highways US-58, VA-35, and VA-652, about 250 feet northeast of the junction of Highways VA-651 and VA-652, about 180 feet north of railroad tracks, in woodland; elevation 18 feet; Courtland, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 43 minutes 3.00 seconds N. and long. 77 degrees 05 minutes 0.00 second W.

A—0 to 3 inches; very dark grayish brown (2.5Y 3/2) loam; weak medium granular structure; friable, slightly sticky, slightly plastic; many fine and medium roots; few very fine and fine low-continuity interstitial pores and few very fine and fine moderate-continuity tubular pores; very strongly acid; clear smooth boundary.

Bg1—3 to 12 inches; dark gray (5Y 4/1) clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine and medium roots; few very fine and fine moderate-continuity tubular pores; few fine prominent olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bg2—12 to 49 inches; gray (5Y 5/1) clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine and medium roots; few very fine and fine moderate-continuity tubular pores; few fine prominent olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

Cg1—49 to 60 inches; gray (5Y 5/1) clay loam; massive; firm, moderately sticky, moderately plastic; few fine and medium roots; few very fine and fine moderate-continuity tubular pores; few medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Cg2—60 to 70 inches; gray (5Y 5/1) stratified clay loam and sandy clay loam; massive; firm, moderately sticky, moderately plastic; few very fine and fine moderate-continuity tubular pores; few medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

Cg3—70 to 84 inches; light gray (5Y 7/1) clay; massive; firm, moderately sticky, moderately plastic; few very fine and fine moderate-continuity tubular pores; common medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid.

Range in Characteristics

Soil reaction: Extremely acid to moderately acid

A horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 3 to 6
Value—3 to 6

Chroma—1 to 6
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam or silt loam

Bg horizon:
Hue—10YR to 5GY; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—clay loam, silty clay loam, clay, or silty clay; particle-size control section has more than 25 percent silt

Cg horizon:
Hue—10YR to 5GY; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy clay loam, clay loam, silty clay loam, clay, or silty clay

Chewacla Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Loamy alluvium
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Buncombe soils, which are excessively drained and have more sand in the subsoil than the Chewacla soils
- Chastain soils, which are poorly drained and have more clay in the subsoil than the Chewacla soils
- Bibb soils, which are poorly drained and have more sand throughout the profile than the Chewacla soils

Taxonomic Classification

Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts

Typical Pedon

Chewacla loam; located 3.3 miles west-southwest of the junction of Highways VA-615 and VA-622, about 1.9 miles southwest of the junction of Highways US-58 and VA-711, about 1.6 miles southeast of the junction of Highways US-58 and the Greensville County line, in a sweetgum plantation; elevation 61 feet; Adams Grove, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 39 minutes 32.00 seconds N. and long. 77 degrees 27 minutes 26.30 seconds W.

Ap—0 to 6 inches; olive brown (2.5Y 4/4) loam; moderate medium granular structure; friable, nonsticky, nonplastic; many very fine, fine, and coarse roots; many very fine and fine high-continuity interstitial and many fine and medium high-continuity tubular pores; few fine distinct irregular black (10YR 2/1) manganese coatings on faces of peds; few fine faint light olive brown (2.5Y 5/4) masses of oxidized iron; few fine flakes of mica; very strongly acid; clear smooth boundary.

Bw1—6 to 12 inches; olive brown (2.5Y 4/3) silty clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; many fine roots; many fine, medium, and coarse high-continuity tubular pores; common fine distinct irregular black (10YR 2/1) manganese coatings on faces of peds; common fine faint grayish brown (2.5Y 5/2) iron depletions; few fine flakes of mica; moderately acid; clear smooth boundary.

Bw2—12 to 23 inches; strong brown (7.5YR 4/6) loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; many fine, medium, and coarse high-continuity tubular pores; common fine and medium distinct irregular black (10YR 2/1) manganese coatings on faces of peds; common medium prominent grayish brown (10YR 5/2) iron depletions; common fine flakes of mica; strongly acid; gradual smooth boundary.

Bw3—23 to 32 inches; light olive brown (2.5Y 5/4) loam; weak coarse subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; many fine, medium, and coarse high-continuity tubular pores; common medium distinct irregular black (10YR 2/1) manganese coatings on faces of peds; common coarse distinct light brownish gray (2.5Y 6/2) iron depletions; common medium flakes of mica; strongly acid; clear smooth boundary.

Cg1—32 to 40 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; friable, slightly sticky, slightly plastic; many very fine and fine roots; many fine, medium, and coarse high-continuity tubular pores; common fine distinct irregular black (10YR 2/1) manganese coatings throughout; common fine faint gray (2.5Y 6/1) clay depletions and common medium prominent brownish yellow (10YR 6/8) and yellowish brown (10YR 5/6) masses of oxidized iron; common medium flakes of mica; strongly acid; gradual wavy boundary.

Cg2—40 to 45 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; friable, slightly sticky, slightly plastic; few very fine and fine roots; few fine high-continuity tubular pores; common fine distinct irregular black (10YR 2/1) manganese coatings throughout; common medium prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/8) masses of oxidized iron; common fine flakes of mica; very strongly acid; gradual wavy boundary.

Cg3—45 to 53 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; friable, slightly sticky, slightly plastic; few very fine and fine roots; few fine high-continuity tubular pores; few fine distinct irregular black (10YR 2/1) manganese coatings throughout; common medium prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/8) masses of oxidized iron; common fine flakes of mica; very strongly acid; clear smooth boundary.

C—53 to 70 inches; light yellowish brown (10YR 6/4) and dark yellowish brown (10YR 3/6) silt loam; massive; friable, slightly sticky, slightly plastic; few very fine and fine roots; few fine moderate-continuity tubular pores; common fine distinct irregular black (10YR 2/1) manganese coatings throughout; common medium distinct gray (2.5Y 6/1) iron depletions and common fine distinct strong brown (7.5YR 5/6) masses of oxidized iron; common fine flakes of mica; very strongly acid; gradual smooth boundary.

Cg4—70 to 84 inches; gray (5Y 6/1) silt loam; massive; firm, slightly sticky, slightly plastic; few fine moderate-continuity tubular pores; common fine distinct irregular black (10YR 2/1) manganese coatings on surfaces along pores; common medium prominent dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) masses of oxidized iron; common fine flakes of mica; very strongly acid.

Range in Characteristics

Soil reaction: Very strongly acid to slightly acid

Rock fragments: 0 to 5 percent
Mica flakes: Few to many

A or Ap horizon:
Hue—5YR to 2.5Y
Value—3 to 5
Chroma—1 to 6
Texture—sandy loam, fine sandy loam, loam, silt loam, or clay loam

Bw horizon:
Hue—5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, silt loam, sandy clay loam, clay loam, or silty clay loam

Bg horizon (where present):
Hue—10YR or 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, silt loam, sandy clay loam, clay loam, or silty clay loam

Cg horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, silt loam, sandy clay loam, clay loam, or silty clay loam within 40 inches of the surface; loamy fine sand, loamy sand, sandy loam, loam, or silt loam below 40 inches

C horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, silt loam, sandy clay loam, clay loam, or silty clay loam within 40 inches of the surface; loamy fine sand, loamy sand, sandy loam, loam, or silt loam below 40 inches

Craven Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Clayey marine deposits
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 0 to 10 percent

Associated Soils

- Emporia soils, which are well drained and have less clay in the subsoil than the Craven soils
- Slagle soils, which have less clay in the subsoil than the Craven soils
- Soils that have clayey substrata
- Soils that have more silt in the subsoil than the Craven soils

Taxonomic Classification

Fine, mixed, subactive, thermic Aquic Hapludults

Typical Pedon

Craven loam; located 2.7 miles northwest of Surry, 1.2 miles north-northeast of the junction of Highways VA-10 and VA-618, about 0.3 mile west of the junction of Highways VA-618 and VA-619, about 350 feet north of Highway VA-619, in an idle field; elevation 102 feet; Claremont, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 09 minutes 1.00 second N. and long. 76 degrees 52 minutes 54.00 seconds W.

Ap—0 to 6 inches; brown (10YR 5/3) loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine roots; moderately acid; abrupt smooth boundary.

Bt—6 to 25 inches; yellowish brown (10YR 5/6) clay; strong medium angular blocky structure and strong medium subangular blocky; firm, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions and common medium prominent red (2.5YR 4/8) and many coarse prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Btg—25 to 38 inches; light gray (10YR 7/1) clay; moderate medium angular blocky structure and moderate medium subangular blocky; firm, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; many coarse prominent yellowish brown (10YR 5/8), strong brown (7.5YR 5/8), and yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.

BC—38 to 54 inches; yellowish brown (10YR 5/6) clay loam; weak coarse angular blocky structure; firm, moderately sticky, moderately plastic; few distinct clay films on all faces of peds; common coarse prominent light gray (10YR 7/1) iron depletions and many coarse prominent yellowish red (5YR 4/6) and yellowish brown (10YR 5/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

C—54 to 64 inches; yellowish brown (10YR 5/6) sandy clay loam; massive; friable, moderately sticky, moderately plastic; common medium prominent light gray (N 7/) iron depletions; extremely acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more
Soil reaction: Extremely acid to strongly acid

A horizon (where present):
Hue—10YR or 2.5Y
Value—3 or 4
Chroma—1 to 3
Texture—fine sandy loam, loam, or silt loam

Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 to 3
Texture—fine sandy loam, loam, or silt loam; clay loam where eroded

E horizon (where present):
Hue—10YR to 5Y
Value—5 to 7
Chroma—2 to 4
Texture—fine sandy loam, loam, or silt loam

BE horizon (where present):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 8
Texture—loam, sandy clay loam, silty clay loam, or clay loam

Bt horizon (upper part):
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—4 to 8
Redoximorphic features—masses of oxidized iron in shades of red, brown, and yellow
Texture—clay loam, silty clay loam, silty clay, or clay

Bt horizon (lower part):
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—clay loam, silty clay loam, silty clay, or clay

Btg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—clay loam, silty clay loam, silty clay, or clay

BC or BCg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 to 6
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay

C or Cg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 to 6
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—loamy sand, sandy loam, loam, sandy clay loam, or clay loam

Dogue Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Clayey alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 6 percent

Associated Soils

- Bojac soils, which are well drained and have less clay in the subsoil than the Dogue soils
- Augusta soils, which are somewhat poorly drained and have less clay in the subsoil than the Dogue soils
- State soils, which are well drained and have less clay in the subsoil than the Dogue soils
- Altavista soils, which have less clay in the subsoil than the Dogue soils

Taxonomic Classification

Fine, mixed, semiactive, thermic Aquic Hapludults

Typical Pedon

Dogue loam; located 2.4 miles northwest of Bacons Castle on Chippokes Plantation State Park, 0.8 mile south-southwest of the mouth of Lower Chippokes Creek, 0.4 mile east-southeast of the junction of Highways VA-783 and VA-633, about 200 feet northeast of farm lane, in a cultivated field; elevation 42 feet; Hog Island, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 08 minutes 17.00 seconds N. and long. 76 degrees 42 minutes 57.00 seconds W.

Ap—0 to 10 inches; brown (10YR 4/3) loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine roots; moderately acid; clear smooth boundary.

Bt1—10 to 21 inches; yellowish brown (10YR 5/4) clay loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; many fine roots; few distinct clay films on all faces of peds; 5 percent rounded quartz gravel; moderately acid; gradual smooth boundary.

Bt2—21 to 34 inches; yellowish brown (10YR 5/4) and strong brown (7.5YR 5/8) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; many fine roots; few distinct clay films on all faces of peds; many medium prominent gray (10YR 6/1) iron depletions; common fine flakes of mica; strongly acid; clear smooth boundary.

Bt3—34 to 45 inches; strong brown (7.5YR 5/6) clay; moderate coarse subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; few distinct clay films on all faces of peds; common medium prominent irregular weakly cemented black (10YR 2/1) iron-manganese concretions in matrix; many medium prominent gray (10YR 6/1) iron depletions; common fine flakes of mica; strongly acid; abrupt smooth boundary.

C—45 to 60 inches; brown (7.5YR 4/4) sandy clay loam; massive; firm, moderately sticky, moderately plastic; common fine roots; common fine flakes of mica; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Rock fragment content: 0 to 15 percent quartz gravel in the A, E, and B horizons; 0 to 25 percent quartz gravel in the C horizon
Mica flakes: Few to common in the B and C horizons

A horizon (where present):
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 4
Texture—fine sandy loam, loam, or silt loam

Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 4
Texture—fine sandy loam, loam, or silt loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 6
Texture—fine sandy loam, loam, or silt loam

BA or BE horizon (where present):
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—4 to 8
Texture—loam, sandy clay loam, or clay loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, sandy clay, or clay

Btg horizon:
Hue—7.5YR to 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, sandy clay, or clay

BC or BCg horizon (where present):
Hue—7.5YR to 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, sandy clay loam, clay loam, or sandy clay

C or Cg horizon:
Hue—7.5YR to 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 to 8

Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture (fine-earth fraction)—stratified sand to sandy clay loam

Emporia Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Loamy marine deposits
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 50 percent

Associated Soils

- Nevarc soils, which are moderately well drained and have more clay in the subsoil than the Emporia soils
- Rumford soils, which have less clay in the subsoil than the Emporia soils
- Slagle soils, which are moderately well drained
- Uchee soils, which have sandy surface horizons more than 20 inches thick
- Udorthents, which lack well developed or defined horizons

Taxonomic Classification

Fine-loamy, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Emporia fine sandy loam; located 2.5 miles northeast of Surry, 1.8 miles northeast of the junction of Highways VA-10 and VA-638, about 1.2 miles northwest of the junction of Highways VA-634 and VA-636, about 1.0 mile west of the junction of Highways VA-636 and VA-637, in a stand of loblolly pines; elevation 62 feet; Surry, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 09 minutes 12.00 seconds N. and long. 76 degrees 47 minutes 35.00 seconds W.

A—0 to 6 inches; brown (10YR 5/3) fine sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine roots; very strongly acid; abrupt smooth boundary.
E—6 to 14 inches; light yellowish brown (10YR 6/4) loamy fine sand; weak fine granular structure; very friable, nonsticky, nonplastic; common fine roots; strongly acid; clear smooth boundary.
BE—14 to 18 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; few distinct clay bridges between sand grains; common medium faint light yellowish brown (10YR 6/4) masses of oxidized iron; strongly acid; clear smooth boundary.
Bt—18 to 41 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine roots; few distinct clay films on all faces of peds; common medium distinct yellowish red (5YR 4/6) masses of oxidized iron; strongly acid; gradual smooth boundary.
BC—41 to 54 inches; strong brown (7.5YR 5/6) sandy clay; weak coarse subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; very few distinct clay films on all faces of peds; common medium prominent light gray (10YR 7/1) iron depletions and common medium distinct yellowish red (5YR 4/6) masses of oxidized iron; strongly acid; clear smooth boundary.

C—54 to 72 inches; strong brown (7.5YR 4/6), light gray (N 7/), yellowish red (5YR 4/6), and brownish yellow (10YR 6/6) stratified sandy loam and sandy clay loam; massive; firm, slightly sticky, slightly plastic; strongly acid.

Range in Characteristics

Solum thickness: Commonly 40 to 60 inches, but ranges from 40 to 75 inches
Rock fragments: 0 to 20 percent gravel in the A and B horizons; 0 to 35 percent in the C horizon
Lithologic discontinuity: Below 40 inches in some pedons
Consistence: Firm or very firm in some part of the B or BC horizons of most pedons
Mica flakes: None to common in some pedons
Soil reaction: Very strongly acid to moderately acid

Ap horizon (where present):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 to 4
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

A horizon:
Hue—10YR or 2.5Y
Value—2 to 6
Chroma—2 to 4
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

E horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 6
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BA or BE horizon:
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Bt horizon (upper part):
Hue—5YR to 10YR
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Bt horizon (lower part):
Hue—5YR to 2.5Y; or multicolored without a dominant matrix hue
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray below a depth of 36 inches; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; sandy clay or clay in some pedons

Btg horizon (where present):
Hue—5YR to 2.5Y; or neutral in hue and has value of 4 to 6
Value—4 to 6
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; sandy clay or clay in some pedons

BC or BCg horizon:
Hue—2.5YR to 2.5Y; or neutral in hue and has value of 4 to 6
Value—4 to 6
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; sandy clay or clay in some pedons

C or Cg horizon:
Hue—2.5YR to 5Y; or neutral in hue and has value of 3 to 8
Value—3 to 8
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam to sandy clay loam

Eulonia Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Clayey marine deposits
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 10 percent

Associated Soils

- Emporia soils, which are well drained and have less clay in the subsoil than the Eulonia soils
- Nevarc soils, which have a perched water table
- Slagle soils, which have less clay in the subsoil than the Eulonia soils

Taxonomic Classification

Fine, mixed, subactive, thermic Aquic Hapludults

Typical Pedon

Eulonia fine sandy loam; located 0.38 mile south of Highway VA-632 at the end of a private road to Cohoke Farm, 100 yards northeast of the Pamunkey River, in a cultivated field; elevation 35 feet; Tunstall, VA, 7.5-minute USGS topographic quadrangle; King William County, Virginia; NAD27; lat 37 degrees 35 minutes 40.00 seconds N. and long 77 degrees 02 minutes 26.00 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium granular structure; friable, slightly sticky, nonplastic; many fine and medium roots; very strongly acid; clear smooth boundary.

Bt1—7 to 17 inches; yellowish brown (10YR 5/6) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; few fine distinct yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Bt2—17 to 24 inches; yellowish brown (10YR 5/8) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; common medium prominent light brownish gray (10YR 6/2) iron depletions and few fine prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Bt3—24 to 31 inches; brownish yellow (10YR 6/6) sandy clay; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; few faint clay films on all faces of peds; many medium prominent light gray (10YR 7/2) iron depletions; very strongly acid; gradual smooth boundary.

BCg—31 to 45 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; thin strata of yellow (10YR 7/6) loamy sand material; common faint clay bridges between sand grains; many medium prominent strong brown (7.5YR 5/8) and brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

C1—45 to 60 inches; brownish yellow (10YR 6/6) sandy loam; massive; very friable, nonsticky, nonplastic; many medium prominent light gray (10YR 7/2) iron depletions; very strongly acid; clear wavy boundary.

C2—60 to 75 inches; brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6) sandy loam; massive; very friable, nonsticky, nonplastic; many fine prominent light gray (10YR 7/2) iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 80 inches or more

Soil reaction: Very strongly acid to moderately acid, except where lime has been applied

Rock fragments: 0 to 3 percent gravel throughout

A horizon (where present):

Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 to 3
Texture—fine sandy loam, loam, or silt loam

Ap horizon:

Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 3
Texture—fine sandy loam, loam, or silt loam

Bt horizon:

Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown and yellow
Texture—clay loam, sandy clay, or clay

BCg horizon:

Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2

Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, or sandy clay

C horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture—variable, ranging from sand to clay

Cg horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture—variable, ranging from sand to clay

Faceville Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Clayey marine deposits
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 2 to 10 percent

Associated Soils

- Emporia soils, which have less clay in the subsoil than the Faceville soils
- Slagle soils, which are moderately well drained and have less clay in the subsoil than the Faceville soils

Taxonomic Classification

Fine, kaolinitic, thermic Typic Kandiudults

Typical Pedon

Faceville fine sandy loam; located 1.1 miles northeast of the junction of VA-619 and VA-631 on VA-619, about 50 feet west of VA-619, on an elevated rise, in cropland; elevation 190 feet; Aylett, VA, 7.5-minute USGS topographic quadrangle; King and Queen County, Virginia; NAD27; lat. 37 degrees 51 minutes 59.00 seconds N. and long. 77 degrees 03 minutes 39.00 seconds W.

Ap—0 to 7 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium granular structure; very friable, slightly sticky, slightly plastic; many fine and medium and few coarse roots; strongly acid; abrupt smooth boundary.
AB—7 to 9 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium granular structure; very friable, slightly sticky, nonplastic; many fine and medium and few coarse roots; strongly acid; gradual wavy boundary.
Bt1—9 to 18 inches; yellowish brown (10YR 5/8) sandy clay; weak medium subangular blocky structure; friable, moderately sticky, slightly plastic; many fine and medium and few coarse roots; few fine and medium vesicular pores; common distinct clay films on all faces of peds; strongly acid; gradual wavy boundary.

Bt2—18 to 30 inches; reddish yellow (7.5YR 7/8) and strong brown (7.5YR 5/8) sandy clay; moderate medium subangular blocky structure; friable, moderately sticky, slightly plastic; many fine and medium roots; few fine and medium vesicular pores; common distinct clay films on all faces of peds; strongly acid; gradual wavy boundary.

Bt3—30 to 47 inches; yellowish red (5YR 5/6) and red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; few fine vesicular pores; common distinct clay films on all faces of peds; strongly acid; gradual wavy boundary.

Bt4—47 to 67 inches; strong brown (7.5YR 5/8), red (2.5YR 4/8), and yellowish red (5YR 5/6) sandy clay; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; many medium lenses of clay loam; few distinct clay films on all faces of peds; strongly acid.

Range in Characteristics

Solum thickness: 65 inches or more

Rock fragments: 0 to 3 percent ironstone nodules in the A and E horizons; 0 to 10 percent quartz gravel throughout

Soil reaction: Very strongly acid or strongly acid, except where lime has been applied

A horizon:

Hue—5YR to 10YR
Value—4 or 5
Chroma—2 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon (where present):

Hue—5YR to 10YR
Value—5 to 7
Chroma—3 or 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BA horizon:

Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—6 or 8
Texture—sandy clay loam or clay loam

Bt horizon:

Hue—10R to 5YR
Value—4 or 5
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of gray below 60 inches; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy clay, clay loam, or clay; clay content of control section ranges from 36 to 55 percent and has less than 30 percent silt

BC horizon (where present):

Hue—10R to 5YR
Value—4 or 5
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of gray below 60 inches; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy clay or sandy clay loam

Georgeville Series

Major land resource area: Southern Piedmont
Landform: Hills
Parent material: Clayey residuum from Carolina slate
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 2 to 25 percent

Associated Soils

- Helena soils, which are moderately well drained
- Appling soils, which are well drained and have browner colors in the subsoil than the Georgeville soils

Taxonomic Classification

Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Georgeville silt loam; located 2.1 miles north-northeast of the junction of Highways VA-611 and VA-624, about 0.6 mile west of Highway VA-699, in woodland; elevation 230 feet; Church Road, VA, 7.5-minute USGS topographic quadrangle; Dinwiddie County, Virginia; NAD27; lat. 37 degrees 13 minutes 51.00 seconds N. and long. 77 degrees 40 minutes 44.00 seconds W.

A—0 to 4 inches; brown (7.5YR 4/4) silt loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; common fine and medium and few coarse roots; very strongly acid; clear smooth boundary.

BA—4 to 8 inches; red (2.5YR 4/6) silty clay loam; strong medium and coarse subangular blocky structure; firm, moderately sticky, slightly plastic; few fine and medium roots; strongly acid; clear wavy boundary.

Bt1—8 to 21 inches; red (2.5YR 4/8) clay; strong fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium roots; few faint clay films on all faces of peds; strongly acid; gradual smooth boundary.

Bt2—21 to 51 inches; red (2.5YR 4/8) silty clay; strong fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine and medium roots; few faint clay films on all faces of peds; strongly acid; few fine prominent bodies of highly weathered brownish yellow (10YR 6/8) parent material; gradual smooth boundary.

BC—51 to 75 inches; red (2.5YR 4/8) silty clay loam; weak coarse and very coarse subangular blocky structure; firm, moderately sticky, slightly plastic; few fine roots; strongly acid; few fine and medium prominent bodies of highly weathered brownish yellow (10YR 6/8) parent material.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent slate gravel in the A and BA horizons; 0 to 5 percent in the Bt horizon; 0 to 10 percent in the BC and C horizons
Soil reaction: Very strongly acid to moderately acid in the A horizon; very strongly acid or strongly acid in the BA, Bt, BC, and C horizons
Mica flakes: Few in the BC and C horizons of some pedons

A or Ap horizon:
Hue—5YR to 10YR
Value—4 or 5

Chroma—6 or 8
Texture—silt loam

BA horizon:
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—6 or 8
Texture—clay loam or silty clay loam

Bt horizon:
Hue—10R to 5YR; 5YR occurs only in upper part of horizon
Value—4 or 5
Chroma—6 or 8
Lithochromic mottles—yellow and brown in the lower part of the horizon
Texture—clay loam, silty clay loam, clay, or silty clay

BC horizon:
Hue—10R to 5YR
Value—4 or 5
Chroma—6 or 8
Lithochromic mottles—yellow and brown
Texture—silt loam, clay loam, or silty clay loam

C horizon (where present):
Hue—10R to 10YR
Value—4 to 6
Chroma—3 to 8
Lithochromic mottles—yellow, brown, red, and gray
Texture—fine sandy loam, loam, or silt loam

Helena Series

Major land resource area: Southern Piedmont
Landform: Hills
Parent material: Clayey residuum from acid crystalline rocks
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 2 to 15 percent

Associated Soils

- Appling, Faceville, and Georgeville soils, which are well drained
- Roanoke soils, which are poorly drained

Taxonomic Classification

Fine, mixed, semiactive, thermic Aquic Hapludults

Typical Pedon

Helena loam; located 0.2 mile north-northeast of the junction of Highways VA-40 and VA-644, about 240 feet east of Highway VA-644, in woodland; elevation 258 feet; McKinney, VA, 7.5-minute USGS topographic quadrangle; Dinwiddie County, Virginia; NAD27; lat. 36 degrees 59 minutes 36.00 seconds N. and long. 77 degrees 43 minutes 28.00 seconds W.

A—0 to 2 inches; grayish brown (10YR 5/2) loam; weak fine granular structure; friable, nonsticky, nonplastic; many fine roots; strongly acid; abrupt smooth boundary.

E—2 to 7 inches; pale brown (10YR 6/3) loam; weak fine granular structure; friable, nonsticky, nonplastic; few fine roots; strongly acid; clear smooth boundary.

BE—7 to 16 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium granular structure; friable, slightly sticky, slightly plastic; few fine roots; few fine distinct strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bt1—16 to 21 inches; pale brown (10YR 6/3) clay loam; weak fine angular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; few faint clay films on all faces of peds; common medium distinct yellowish brown (10YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bt2—21 to 32 inches; yellowish brown (10YR 5/4) clay; moderate medium and coarse angular blocky structure; very firm, moderately sticky, moderately plastic; few fine and medium roots; few faint clay films on all faces of peds; common fine distinct gray (10YR 6/1) iron depletions; very strongly acid; clear wavy boundary.

Bt3—32 to 43 inches; brownish yellow (10YR 6/8) clay; weak medium and coarse angular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; few faint clay films on all faces of peds; many medium prominent gray (10YR 6/1) iron depletions and many medium faint reddish yellow (7.5YR 6/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

BC—43 to 55 inches; very pale brown (10YR 7/3) clay loam; weak medium and coarse angular blocky structure; very firm, moderately sticky, moderately plastic; common distinct clay films on all faces of peds; many medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Cg—55 to 72 inches; light gray (10YR 7/1) sandy clay loam; massive; friable, slightly sticky, slightly plastic; many medium prominent brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid; firm in place.

Range in Characteristics

Solum thickness: 40 to 60 inches
Depth to bedrock: 60 inches or more
Rock fragments: 0 to 15 percent quartz gravel
Soil reaction: Very strongly acid to moderately acid in the A and E horizons; very strongly acid or strongly acid in the BE, Bt, BC, and C horizons

A or Ap horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 to 4
Texture—loam or sandy loam

E horizon:
Hue—10YR to 5Y
Value—5 to 8
Chroma—2 to 4
Texture—loam or sandy loam

BE horizon:
Hue—10YR or 2.5Y
Value—5 to 8
Chroma—4 to 8
Texture—sandy clay loam or clay loam

Bt horizon:
Hue—7.5YR to 2.5Y
Value—5 to 8
Chroma—3 to 8

Redoximorphic features—iron depletions in shades of gray in the lower part of the horizon; masses of oxidized iron in shades of yellow, brown, and red
Texture—clay loam or clay

BC horizon:
Hue—7.5YR to 2.5Y
Value—5 to 8
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of yellow, brown, and red
Texture—sandy clay loam or clay loam

Cg horizon:
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of yellow, brown, and red
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam saprolite; clay loam occurs only in seams or pockets

Mattan Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Organic and loamy alluvium
Drainage class: Very poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 1 percent

Associated Soils

- Bibb and Nawney soils, which are poorly drained and are not organic

Taxonomic Classification

Loamy, mixed, euic, thermic Terric Haplosaprists

Typical Pedon

Mattan muck; located 0.5 mile north of the junction of Highways VA-608 and VA-609, about 0.75 mile south of the Pamunkey River, 50 feet east of a private road to Big Island; elevation 3 feet; Tunstall, VA, 7.5-minute USGS topographic quadrangle; New Kent County, Virginia; NAD27; lat. 37 degrees 35 minutes 2.00 seconds N. and long. 77 degrees 03 minutes 3.00 seconds W.

Oa1—0 to 14 inches; gray (5Y 5/1) muck; 15 percent rubbed fiber; massive; many fine and medium roots; weak sulfur odor; extremely acid; gradual smooth boundary.
Oa2—14 to 40 inches; very dark grayish brown (10YR 3/2) muck; 10 percent rubbed fiber; massive; slight sulfur odor; 5 percent subrounded wood gravel; very strongly acid; gradual smooth boundary.
2Cg1—40 to 48 inches; very dark grayish brown (10YR 3/2) loamy sand; massive; slightly sticky, nonplastic; many fine roots; very strongly acid; clear smooth boundary.
2Cg2—48 to 60 inches; dark gray (5Y 4/1) sandy clay loam; massive; slightly plastic; very strongly acid.

Range in Characteristics

Organic layer thickness: 16 to 51 inches
Soil reaction: Extremely acid to moderately acid in the natural state; slightly more acid upon drying
Sulfur content: 0.5 percent in the organic layers
n-value: 2.0 to 5.5 of the organic materials
Woody material: Large pieces of logs and limbs that can be penetrated with an auger in most pedons
Mineral strata: Less than 12 inches thick in some pedon control sections

Oa (surface tier):
Hue—10YR to 5G; or neutral in hue and has value of 2 to 5
Value—2 to 5
Chroma—1 to 3
Organic materials—sapric material; hemic material in some pedons
Texture—muck or mucky analogues of loam, silt loam, clay loam, or silty clay loam

Oa (subsurface tier):
Hue—7.5YR to 5GY; or neutral in hue and has value of 2 to 4
Value—2 to 4
Chroma—1 to 4
Organic materials—sapric; thin layers of hemic material in some pedons
Texture—muck

2Cg horizon:
Hue—10YR to 5GY; or neutral in hue and has value of 2 to 5
Value—2 to 5
Chroma—1 or 2
Texture—commonly stratified, ranges from loamy sand to silty clay loam or mucky analogues of these textures; upper 12 inches has a weighted average clay content of 12 to 35 percent

Myatt Series

Major land resource area: Southern Coastal Plain
Landform: Depressions and flood plains
Parent material: Loamy marine deposits
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Yemassee soils, which are somewhat poorly drained
- Slagle soils, which are moderately well drained
- Emporia soils, which are well drained
- Bibb soils, which have less clay in the subsoil than the Myatt soils
- Roanoke soils, which have more clay in the subsoil than the Myatt soils
- Nansemond soils, which are moderately well drained and have less clay in the subsoil than the Myatt soils
- Rumford soils, which are well drained and have less clay in the subsoil than the Myatt soils
- Craven soils, which are moderately well drained and have more clay in the subsoil than the Myatt soils

Taxonomic Classification

Fine-loamy, siliceous, active, thermic Typic Endoaquults

Typical Pedon

Myatt loam; located 1.8 miles west-northwest of the junction of Highway VA-680 and the Hertford County, NC, line, 1.1 miles south-southwest of the junction of Highways VA-679 and VA-684, about 0.7 mile east-southeast of the junction of Highways VA-678 and VA-684, in woodland; elevation 81 feet; Sunbeam, VA-NC, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 32 minutes 55.00 seconds N. and long. 77 degrees 03 minutes 11.80 seconds W.

A—0 to 5 inches; very dark gray (2.5Y 3/1) loam; moderate medium granular structure; friable, nonsticky, nonplastic; many very fine and fine roots and common medium and coarse roots; common fine moderate-continuity interstitial and tubular pores; very strongly acid; abrupt wavy boundary.

Eg—5 to 12 inches; light brownish gray (2.5Y 6/2) sandy loam; weak medium granular structure; friable, nonsticky, nonplastic; common very fine, fine, medium, and coarse roots; few very fine and fine low-continuity interstitial and tubular pores; few medium prominent olive yellow (2.5Y 6/8) and common medium faint light yellowish brown (2.5Y 6/3) masses of oxidized iron; very strongly acid; clear wavy boundary.

BEg—12 to 19 inches; gray (2.5Y 6/1) sandy loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine, fine, and medium and common coarse roots; common very fine and fine low-continuity interstitial and tubular pores; few medium prominent strong brown (7.5YR 5/6) and many coarse distinct light yellowish brown (2.5Y 6/3) masses of oxidized iron; very strongly acid; clear wavy boundary.

Btg1—19 to 27 inches; gray (2.5Y 6/1) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine moderate-continuity interstitial and tubular pores; few fine prominent olive yellow (2.5Y 6/6) and many medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; diffuse wavy boundary.

Btg2—27 to 39 inches; gray (2.5Y 6/1) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine, fine, medium, and coarse roots; common very fine and fine moderate-continuity interstitial and tubular pores; common medium prominent strong brown (7.5YR 5/6) and brownish yellow (10YR 6/6) and many medium prominent yellowish red (5YR 5/8) masses of oxidized iron; extremely acid; clear wavy boundary.

BCg—39 to 52 inches; gray (2.5Y 6/1) sandy clay loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine, fine, and medium roots; common very fine and fine moderate-continuity interstitial and tubular pores; common fine and medium prominent brownish yellow (10YR 6/6) and medium strong brown (7.5YR 5/6) masses of oxidized iron; extremely acid; clear wavy boundary.

Cg1—52 to 58 inches; gray (2.5Y 6/1) sandy clay loam; massive; friable, slightly sticky, nonplastic; common very fine and fine moderate-continuity interstitial and tubular pores; few fine prominent brownish yellow (10YR 6/6) and strong brown (7.5YR 5/6) masses of oxidized iron; 5 percent rounded quartz gravel; extremely acid; clear wavy boundary.

Cg2—58 to 80 inches; gray (2.5Y 5/1) sandy loam; massive; friable, slightly sticky, nonplastic; common very fine and fine moderate-continuity interstitial and tubular pores; few fine prominent dendritic yellow (10YR 7/6) masses of oxidized iron; 5 percent rounded quartz gravel; extremely acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Soil reaction: Very strongly acid to moderately acid in the A, Eg, BEg, and Btg horizons, except where lime has been applied; extremely acid to strongly acid in the BCg and Cg horizons
Rock fragments: 0 to 3 percent quartz in the A, Eg, BEg, Btg, and BCg horizons; 5 to 25 percent in the Cg horizon

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—1 or 2
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Eg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

BEg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Btg horizon:
Hue—5Y to 10YR; or neutral in hue and has value of 3 to 7
Value—3 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; thin strata of sandy clay in some pedons; silt content ranges from 20 to 45 percent

BCg horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 3 to 7
Value—3 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

Cg horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 5 to 8
Value—5 to 8
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sandy loam, fine sandy loam, sandy clay loam, or clay loam; stratified with sandy and clayey material in some pedons

Nansemond Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces, depressions, and drainageways
Parent material: Loamy marine deposits
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: High
Slope range: 0 to 4 percent

Associated Soils

- Rumford soils, which are well drained
- Yemassee soils, which are somewhat poorly drained and have more clay in the subsoil than the Nansemond soils
- Slagle soils, which have more clay in the subsoil than the Nansemond soils

Taxonomic Classification

Coarse-loamy, siliceous, subactive, thermic Aquic Hapludults

Typical Pedon

Nansemond sandy loam; located 4.5 miles southeast of Elberon, 0.5 mile south-southwest of the junction of Highways VA-617 and VA-622 at Berrymans Corner, 300 feet north of the junction of Highways VA-622 and VA-623, about 200 feet east of Highway VA-622, in a cultivated field; elevation 78 feet; Runnymede, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 01 minute 18.00 seconds N. and long. 76 degrees 50 minutes 1.00 second W.

Ap—0 to 8 inches; brown (10YR 5/3) sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine roots; moderately acid; abrupt smooth boundary.

E—8 to 12 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak fine granular structure; friable, nonsticky, nonplastic; common fine roots; strongly acid; abrupt smooth boundary.

Bt1—12 to 27 inches; light olive brown (2.5Y 5/6) sandy loam; weak fine subangular blocky structure; friable, moderately sticky, moderately plastic; few fine roots; few distinct clay bridges between sand grains; common medium prominent light yellowish brown (10YR 6/4) masses of oxidized iron; very strongly acid; clear smooth boundary.

Bt2—27 to 42 inches; light yellowish brown (2.5Y 6/4), brownish yellow (10YR 6/6), and light brownish gray (10YR 6/2) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine roots; common distinct clay bridges between sand grains; extremely acid; gradual smooth boundary.

BCg—42 to 52 inches; gray (10YR 6/1) fine sandy loam; weak medium subangular blocky structure; friable, moderately sticky, moderately plastic; few distinct clay bridges between sand grains; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; extremely acid; gradual smooth boundary.

Cg—52 to 70 inches; gray (10YR 6/1) sandy loam; massive; friable, slightly sticky, nonplastic; common medium prominent red (2.5YR 4/6), yellowish red (5YR 5/6), and brownish yellow (10YR 6/6) masses of oxidized iron; extremely acid.

Range in Characteristics

Soil reaction: Extremely acid to moderately acid
Rock fragments: 0 to 5 percent quartz gravel in the A and E horizons; 0 to 35 percent quartz gravel in the B and C horizons

A horizon (where present):
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—2 to 6
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BA or BE horizon (where present):
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 to 6
Texture (fine-earth fraction)—sandy loam or fine sandy loam

Bt horizon (upper part):
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown and yellow
Texture (fine-earth fraction)—sandy loam or fine sandy loam; thin layers of loam or sandy clay loam in some pedons

Bt horizon (lower part):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of brown and yellow
Texture (fine-earth fraction)—sandy loam or fine sandy loam; thin subhorizons of loam or sandy clay loam in some pedons

BC or BCg horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture (fine-earth fraction)—loamy sand, loamy fine sand, or sandy loam

C or Cg horizon:
Hue—7.5YR to 5Y; or neutral in hue and has value of 4 to 8
Value—4 to 8
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow

Texture (fine-earth fraction)—sand, fine sand, loamy sand, loamy fine sand, or sandy loam; thin strata of sandy clay loam in some pedons

Nawney Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains and swamps
Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 1 percent

Associated Soils

- Bibb soils, which are poorly drained and have less clay in the profile than the Nawney soils
- Mattan soils, which are organic

Taxonomic Classification

Fine-loamy, mixed, active, acid, thermic Typic Fluvaquents

Typical Pedon

Nawney loam; located 2.5 miles northwest of Windsor, 0.2 mile west of the junction of Highways VA-638 and VA-657, about 0.7 mile east-northeast of the junction of Highways VA-638 and VA-641; elevation 50 feet; Zuni, VA, 7.5-minute USGS topographic quadrangle; Isle of Wight County, Virginia; NAD27; lat. 36 degrees 49 minutes 49.00 seconds N. and long. 76 degrees 47 minutes 7.00 seconds W.

A1—0 to 5 inches; very dark gray (5Y 3/1) loam; massive; friable, slightly sticky; many fine, medium, and coarse roots; common fine distinct strong brown (7.5YR 5/6) masses of oxidized iron; strongly acid; clear wavy boundary.

A2—5 to 10 inches; olive gray (5Y 4/2) loam; massive; friable, slightly sticky; many fine and medium roots; common fine distinct strong brown (7.5YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.

Cg1—10 to 30 inches; grayish brown (2.5Y 5/2) loam; massive; friable, slightly sticky; many fine, medium, and coarse roots; many fine distinct strong brown (7.5YR 4/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

Cg2—30 to 35 inches; gray (10YR 5/1) sandy clay loam; massive; friable, moderately sticky, moderately plastic; many fine and medium and common coarse roots; many fine and medium distinct reddish brown (5YR 4/4) and dark yellowish brown (10YR 4/4) masses of oxidized iron; strongly acid; clear wavy boundary.

Cg3—35 to 44 inches; gray (10YR 6/1) fine sandy loam; massive; very friable; common fine and medium distinct strong brown (7.5YR 4/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

Cg4—44 to 54 inches; gray (10YR 6/1) loamy sand; massive; very friable; many fine and medium distinct yellowish brown (10YR 5/4) masses of oxidized iron; strongly acid; clear wavy boundary.

Cg5—54 to 60 inches; dark gray (10YR 4/1) stratified sandy clay loam, clay loam, and silty clay loam; massive; friable; strongly acid.

Range in Characteristics

Depth to sandy horizons: 40 to 60 inches
Soil reaction: Extremely acid to strongly acid above a depth of 40 inches; extremely acid to slightly acid below 40 inches

A horizon:

Hue—7.5YR to 5Y; or neutral in hue and has value of 2 to 5
Value—2 to 5
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, or silt loam

Cg horizon:

Hue—10YR to 5BG; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, or silty clay loam above 40 inches; typically stratified sand to clay below 40 inches; pockets or strata of coarser or finer textures in some pedons

Nevarc Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Clayey alluvium and marine deposits
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 10 to 50 percent

Associated Soils

- Emporia soils, which are well drained and have less clay in the subsoil than the Nevarc soils
- Slagle soils, which have less clay in the subsoil than the Nevarc soils
- Rumford soils, which are well drained and have less clay in the subsoil than the Nevarc soils
- Craven soils, which have an apparent water table

Taxonomic Classification

Fine, mixed, subactive, thermic Aquic Hapludults

Typical Pedon

Nevarc loam; located 1.3 miles east-southeast of the junction of Highway VA-650 and the Hog Island Wildlife Management area access road entrance, 0.4 mile southwest of the mouth of Lawnes Creek, 300 feet west of public boat landing ramp, in a stand of mixed hardwoods; elevation 25 feet; Hog Island, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 08 minutes 20.00 seconds N. and long. 76 degrees 40 minutes 37.00 seconds W.

A—0 to 2 inches; very dark grayish brown (10YR 3/2) loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine and medium roots; very strongly acid; abrupt smooth boundary.
E—2 to 4 inches; pale brown (10YR 6/3) loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine and medium roots; very strongly acid; abrupt smooth boundary.
Bt1—4 to 24 inches; yellowish brown (10YR 5/6) clay loam; moderate medium angular blocky structure; firm, moderately sticky, moderately plastic; many fine and medium roots; common prominent clay films on all faces of peds; common fine

prominent light gray (10YR 7/1) iron depletions and common fine distinct strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Bt2—24 to 36 inches; yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; common fine roots; common prominent clay films on all faces of peds; common medium prominent gray (10YR 6/1) iron depletions; common fine flakes of mica; very strongly acid; clear smooth boundary.

BCg—36 to 50 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine roots; few distinct clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

C—50 to 67 inches; brownish yellow (10YR 6/6) fine sandy loam; massive; friable, moderately sticky, moderately plastic; common fine roots; common medium prominent light gray (10YR 7/2) iron depletions and common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common fine and medium flakes of mica; very strongly acid; clear smooth boundary.

Cg—67 to 74 inches; light gray (10YR 7/1) fine sandy loam; massive; friable, slightly sticky, slightly plastic; common fine roots; common fine prominent light yellowish brown (10YR 6/4) masses of oxidized iron; very strongly acid.

Range in Characteristics

Soil reaction: Extremely acid to moderately acid

Rock fragments: 0 to 15 percent gravel in the A, E, and B horizons; 0 to 35 percent gravel in the C horizon

A horizon:

Hue—7.5YR to 2.5Y
Value—2 to 6
Chroma—2 to 4
Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam

E horizon:

Hue—10YR to 5Y
Value—5 to 7
Chroma—3 to 8
Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam

BA or BE horizon (where present):

Hue—7.5YR or 10YR
Value—4 to 7
Chroma—4 to 8
Texture—loam, sandy clay loam, clay loam, or silty clay loam

Bt horizon (upper part):

Hue—7.5YR or 10YR
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—masses of oxidized iron in shades of brown or yellow
Texture—sandy clay loam, clay loam, silty clay loam, sandy clay, clay, or silty clay

Bt horizon (lower part):

Hue—5YR to 2.5Y
Value—4 to 7
Chroma—3 to 8

Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, silty clay loam, sandy clay, clay, or silty clay

BC or BCg horizon:
Hue—5YR to 2.5Y
Value—4 to 7
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, clay loam, silty clay loam, sandy clay, clay, or silty clay

C or Cg horizon:
Hue—5YR to 2.5Y
Value—4 to 7
Chroma—1 to 8
Redoximorphic features—iron depletions in shades of gray and white; masses of oxidized iron in shades of red, brown, and yellow
Texture (fine-earth fraction)—typically stratified, ranging from sand to clay

Ocilla Series

Major land resource area: Southern Coastal Plain
Landform: Heads of drainageways on marine terraces
Parent material: Loamy marine deposits
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 6 percent

Associated Soils

- Uchee soils, which are well drained
- Rumford and Emporia soils, which are well drained and do not have thick, sandy surface layers
- Slagle and Nansemond soils, which are moderately well drained and do not have thick, sandy surface layers
- Seabrook soils, which are moderately well drained and are sandy throughout the profile

Taxonomic Classification

Loamy, siliceous, semiactive, thermic Aquic Arenic Hapludults

Typical Pedon

Ocilla loamy sand; located 0.8 mile northwest of Sedley, 1.0 mile southwest of the junction of Highways VA-641 and VA-645, about 0.6 mile northeast of the junction of Highways VA-632 and VA-643, in woodland; elevation 85 feet; Sedley, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 46 minutes 45.00 seconds N. and long. 76 degrees 59 minutes 52.00 seconds W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) loamy sand; weak medium granular structure; very friable, nonsticky, nonplastic; many very fine and fine and few medium roots; very strongly acid; clear smooth boundary.
E—4 to 30 inches; pale yellow (2.5Y 7/4) loamy sand; weak coarse subangular blocky structure; very friable, nonsticky, nonplastic; many very fine and fine roots; few medium distinct gray (2.5Y 6/1) iron depletions; very strongly acid; clear smooth boundary.

Bt1—30 to 34 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable, nonsticky, nonplastic; few very fine and fine roots; common medium moderate-continuity interstitial pores; common medium prominent gray (10YR 6/1) iron depletions and few medium distinct light yellowish brown (2.5Y 6/4) masses of oxidized iron; very strongly acid; clear smooth boundary.

Bt2—34 to 42 inches; yellowish brown (10YR 5/6) sandy loam; moderate medium subangular blocky structure; friable, slightly sticky, nonplastic; few very fine roots; common medium moderate-continuity interstitial pores; few faint clay films on surfaces along root channels and on surfaces along pores and common distinct clay bridges between sand grains; common medium prominent gray (10YR 6/1) iron depletions and few medium distinct light yellowish brown (2.5Y 6/4) masses of oxidized iron; very strongly acid; pockets of sandy clay loam; gradual wavy boundary.

BC—42 to 50 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak coarse subangular blocky structure; friable, slightly sticky, nonplastic; few very fine roots; common fine low-continuity vesicular pores and common fine low-continuity interstitial pores; few distinct clay bridges between sand grains; many coarse distinct gray (10YR 6/1) iron depletions and common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; pockets of coarse sand; gradual wavy boundary.

C1—50 to 58 inches; yellowish brown (10YR 5/6) sandy loam; massive; friable, nonsticky, nonplastic; few fine roots; few fine low-continuity interstitial pores; many coarse prominent gray (10YR 6/1) iron depletions; very strongly acid; pockets of sand; gradual wavy boundary.

C2—58 to 65 inches; strong brown (7.5YR 5/8), yellowish brown (10YR 5/8), and yellow (2.5Y 7/6) sandy loam; massive; friable, nonsticky, nonplastic; few fine roots; common coarse prominent gray (10YR 6/1) iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 60 to 80 inches or more
Soil reaction: Very strongly acid or strongly acid
Rock fragments: 0 to 3 percent ironstone nodules

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—1 or 2
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Hue—10YR to 5Y
Value—4 to 8
Chroma—1 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand

BE horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 8
Texture—loamy sand or loamy fine sand

Bt horizon:
Hue—7.5YR to 2.5Y
Value—5 to 7
Chroma—3 to 8

Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, sandy loam, or sandy clay loam

Btg horizon (where present):
Hue—7.5YR to 5Y
Value—5 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, sandy loam, sandy clay loam; pockets of coarse sandy loam in some pedons

BC horizon:
Hue—7.5YR to 5Y
Value—5 to 8
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, sandy loam, or sandy clay loam

BCg horizon (where present):
Hue—7.5YR to 5Y
Value—5 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, sandy loam, or sandy clay loam

C horizon:
Hue—7.5YR to 5Y
Value—5 to 8
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, sandy clay loam, sandy clay, or clay

Cg horizon (where present):
Hue—7.5YR to 5Y
Value—5 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, sandy clay loam, sandy clay, or clay

Note: Ocilla soils in this survey are a taxadjunct to the series because the clay content of the lower subsoil is less than is typical for the Ocilla series.

Roanoke Series

Major land resource area: Southern Coastal Plain
Landform: Drainageways and low stream terraces
Parent material: Clayey alluvium
Drainage class: Poorly drained

Slowest saturated hydraulic conductivity: Low
Slope range: 0 to 2 percent

Associated Soils

- Augusta and Yemassee soils, which are somewhat poorly drained and have less clay in the subsoil than the Roanoke soils
- Tomotley and Myatt soils, which have less clay in the subsoil than the Roanoke soils
- Chastain soils, which are poorly drained and have a less developed subsoil than the Roanoke soils
- Mattan soils, which are very poorly drained and have thick organic layers

Taxonomic Classification

Fine, mixed, semiactive, thermic Typic Endoaquults

Typical Pedon

Roanoke loam; located 3.4 miles northwest of the junction of Highways US-258 and VA-686, about 1.2 miles southeast of the junction of Highways VA-680 and VA-684, about 0.5 mile southeast of the junction of Highways VA-680 and VA-686, in woodland; elevation 30 feet; Sunbeam, VA-NC, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 34 minutes 34.00 seconds N. and long. 77 degrees 00 minute 47.00 seconds W.

Oi—0 to 1 inch; undecomposed hardwood leaf litter and pine needles.

A—1 to 3 inches; very dark gray (2.5Y 3/1) loam; moderate very coarse granular structure; friable, slightly sticky, slightly plastic; many very fine and fine and common coarse roots; common fine and few medium moderate-continuity tubular pores; very strongly acid; clear smooth boundary.

Eg—3 to 9 inches; olive gray (5Y 5/2) loam; moderate coarse granular structure; friable, slightly sticky, slightly plastic; common very fine, fine, medium, and coarse roots; many very fine and fine moderate-continuity tubular pores; common fine prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear smooth boundary.

Btg1—9 to 18 inches; gray (5Y 5/1) clay; strong medium and coarse subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine, fine, medium, and coarse roots between peds; common very fine and fine low-continuity tubular pores; many faint continuous gray (5Y 5/1) clay films on all faces of peds; common fine prominent yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Btg2—18 to 40 inches; gray (5Y 5/1) clay; strong medium and coarse subangular blocky structure; very firm, moderately sticky, very plastic; few very fine, fine, medium, and coarse roots between peds; few very fine and fine low-continuity tubular pores; many faint continuous gray (5Y 5/1) clay films on all faces of peds; common fine prominent red (10R 4/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

BCg—40 to 50 inches; gray (5Y 5/1) and greenish gray (5GY 5/1) clay; weak medium and coarse subangular blocky structure; very firm, moderately sticky, very plastic; few fine and medium roots between peds; few fine and medium low-continuity tubular pores; common faint discontinuous gray (5Y 5/1) clay films on all faces of peds; common fine prominent red (2.5YR 5/8) masses of oxidized iron; very strongly acid; clear irregular boundary.

Cg—50 to 72 inches; light olive gray (5Y 6/2) clay loam; massive; firm, moderately sticky, moderately plastic; few fine low-continuity tubular pores; common coarse prominent yellowish red (5YR 5/8) masses of oxidized iron that have diffuse boundaries; common very fine flakes of mica; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Soil reaction: Extremely acid to strongly acid in the A, Eg, BEg, Btg, and BCg horizons, except where lime has been applied; extremely acid to slightly acid in the Cg horizon
Rock fragments: 0 to 10 percent quartz gravel in the A, Eg, BEg, Btg, and BCg horizons; 0 to 50 percent quartz gravel in the Cg horizon

A or Ap horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 2 to 6
Value—2 to 6
Chroma—1 or 2
Texture—fine sandy loam, loam, or silt loam

Eg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, loam, or silt loam

BEg horizon (where present):
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—loam, silt loam, clay loam, or silty clay loam

Btg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—clay loam, silty clay loam, clay, or silty clay

BCg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy clay loam, clay loam, silty clay loam, sandy clay, clay, or silty clay

Cg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—variable, ranging from sand to clay

Rumford Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces

Parent material: Loamy and sandy marine deposits
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Slope range: 2 to 6 percent

Associated Soils

- Emporia soils, which have a perched seasonal high water table at a depth of 36 to 52 inches below the surface and have more clay in the subsoil than the Rumford soils
- Uchee soils, which have sandy surface layers greater than 20 inches thick
- Tarboro soils, which are somewhat excessively drained
- Slagle soils, which are moderately well drained

Taxonomic Classification

Coarse-loamy, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Rumford loamy sand; located 1.3 miles northeast of the junction of Highways VA-10 and VA-634, about 0.6 mile northwest of the junction of Highways VA-634 and VA-636 at Alliance, 50 feet east of airfield landing strip, in a cultivated field; elevation 75 feet; Surry, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 08 minutes 41.00 seconds N. and long. 76 degrees 47 minutes 24.00 seconds W.

Ap—0 to 11 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable, nonsticky, nonplastic; common fine roots; slightly acid; abrupt smooth boundary.

Bt1—11 to 25 inches; dark yellowish brown (10YR 4/6) fine sandy loam; moderate medium subangular blocky structure; friable, moderately sticky, slightly plastic; common fine roots; few distinct clay bridges between sand grains; neutral; clear smooth boundary.

Bt2—25 to 38 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; common distinct clay bridges between sand grains; neutral; gradual smooth boundary.

Bt3—38 to 46 inches; yellowish brown (10YR 5/8) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common distinct clay bridges between sand grains; neutral; clear smooth boundary.

BC—46 to 55 inches; yellowish brown (10YR 5/8) loamy sand; moderate medium granular structure; very friable, slightly sticky, nonplastic; few distinct clay bridges between sand grains; slightly acid; gradual smooth boundary.

C—55 to 70 inches; yellowish brown (10YR 5/8) sand; single grain; loose, nonsticky, nonplastic; slightly acid.

Range in Characteristics

Soil reaction: Extremely acid to strongly acid in the A horizon, except where lime has been applied; extremely acid to moderately acid in the B horizon, except where lime has been applied; extremely acid to slightly acid in the C horizon
Rock fragments: 0 to 15 percent in the A, E, and B horizons; 0 to 50 percent in the C horizon

A horizon (where present):
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 or 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BA or BE horizon (where present):
Hue—5YR to 2.5Y
Value—4 or 5
Chroma—4 to 8
Texture—loamy sand, sandy loam, or fine sandy loam

Bt horizon:
Hue—5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam

BC horizon:
Hue—5YR to 2.5Y
Value—4 or 5
Chroma—4 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

C horizon:
Hue—10YR or 2.5Y
Value—5 to 8
Chroma—2 to 8
Texture (fine-earth fraction)—sand, loamy sand, sandy loam, or fine sandy loam

Seabrook Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Sandy alluvium
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: High
Slope range: 0 to 2 percent

Associated Soils

- Bojac soils, which are well drained and have more clay in the subsoil than the Seabrook soils
- Tarboro soils, which are somewhat excessively drained
- Altavista soils, which have more clay in the subsoil than the Seabrook soils
- Augusta soils, which are somewhat poorly drained and have more clay in the subsoil than the Seabrook soils

Taxonomic Classification

Mixed, thermic Aquic Udipsamments

Typical Pedon

Seabrook loamy sand; located 1.5 miles southeast of the junction of Highways VA-35 and VA-670 at Boykins, 1.3 miles south-southwest of the junction of Highways VA-670 and VA-743, about 1.1 miles northeast of the junction of Highway VA-35 and the Northampton County, NC, line, in woodland; elevation 27 feet; Boykins, VA-NC, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 33 minutes 40.00 seconds N. and long. 77 degrees 10 minutes 58.00 seconds W.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) loamy sand; single grain; loose, nonsticky, nonplastic; many very fine and fine roots; many fine moderate-continuity tubular pores; few fine flakes of mica; very strongly acid; clear smooth boundary.

A2—3 to 8 inches; brown (10YR 5/3) loamy sand; single grain; loose, nonsticky, nonplastic; many fine and common very fine roots; many fine moderate-continuity tubular pores; few fine flakes of mica; strongly acid; clear smooth boundary.

C1—8 to 25 inches; brownish yellow (10YR 6/6) loamy fine sand; single grain; loose, nonsticky, nonplastic; common fine and few medium roots; common fine moderate-continuity tubular pores; common fine flakes of mica; moderately acid; gradual wavy boundary.

C2—25 to 32 inches; light yellowish brown (10YR 6/4) loamy fine sand; single grain; loose, nonsticky, nonplastic; few fine and medium roots; common fine moderate-continuity tubular pores; few medium distinct light gray (10YR 7/2) iron depletions and common fine distinct brownish yellow (10YR 6/8) masses of oxidized iron; common fine flakes of mica; moderately acid; diffuse wavy boundary.

Cg—32 to 60 inches; light gray (10YR 7/2) fine sand; single grain; loose, nonsticky, nonplastic; few very fine and fine roots; few fine moderate-continuity tubular pores; common medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; common fine flakes of mica; moderately acid.

Range in Characteristics

Thickness of sandy layer: 72 inches or more
Soil reaction: Extremely acid to slightly acid, except where lime has been applied
Rock fragments: 0 to 10 percent quartz gravel
Mica flakes: None to common

A or Ap horizon:
Hue—10YR or 2.5Y
Value—3 to 5
Chroma—2 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand

C horizon (upper part):
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

C horizon (lower part):
Hue—10YR to 5Y
Value—5 to 7
Chroma—3 to 4
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand, fine sand, loamy sand, or loamy fine sand

Cg horizon:

Hue—10YR to 5Y
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand, fine sand, loamy sand, or loamy fine sand

Slagle Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Loamy marine deposits
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 0 to 10 percent

Associated Soils

- Craven and Nevarc soils, which have more clay in the subsoil than the Slagle soils
- Emporia soils, which are well drained
- Nansemond soils, which have less clay in the subsoil than the Slagle soils
- Uchee soils, which are well drained and have sandy surface layers greater than 20 inches thick
- Myatt soils, which are poorly drained

Taxonomic Classification

Fine-loamy, siliceous, subactive, thermic Aquic Hapludults

Typical Pedon

Slagle fine sandy loam; located 3.3 miles northeast of Surry, 1.2 miles north-northeast of the junction of Highways VA-634 and VA-636, about 1.0 mile northwest of the junction of Highways VA-634 and VA-637, about 800 feet west-northwest of the south junction of Highways VA-636 and VA-637, in a cultivated field; elevation 82 feet; Surry, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia; NAD27; lat. 37 degrees 09 minutes 28.00 seconds N. and long. 76 degrees 46 minutes 49.00 seconds W.

Ap—0 to 8 inches; dark yellowish brown (10YR 4/4) fine sandy loam; moderate medium granular structure; friable, slightly sticky, slightly plastic; many fine roots; strongly acid; clear smooth boundary.

Bt1—8 to 23 inches; brown (7.5YR 5/4) fine sandy loam; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; moderately acid; gradual smooth boundary.

Bt2—23 to 41 inches; brown (7.5YR 5/4) sandy clay loam; weak coarse subangular blocky structure; friable, moderately sticky, moderately plastic; common fine roots; common distinct clay films on all faces of peds; common fine prominent pinkish gray (7.5YR 7/2) and common fine distinct pale brown (10YR 6/3) iron depletions and common fine prominent yellowish red (5YR 5/8) masses of oxidized iron; moderately acid; gradual smooth boundary.

BC—41 to 55 inches; strong brown (7.5YR 5/6), brownish yellow (10YR 6/6), and light gray (10YR 7/1) sandy clay loam; weak coarse subangular blocky structure; firm, moderately sticky, moderately plastic; few distinct clay films on all faces of peds; common medium distinct reddish brown (5YR 5/4) masses of oxidized iron; strongly acid; gradual smooth boundary.

C—55 to 70 inches; light gray (10YR 7/1), brownish yellow (10YR 6/8), and brown (7.5YR 4/4) sandy loam; massive; friable, moderately sticky, moderately plastic; common medium prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more
Soil reaction: Extremely acid to strongly acid; limed areas can be moderately acid
Rock fragments: 0 to 5 percent in the A, E, and B horizons; 0 to 15 percent in the C horizon

A horizon (where present):
Hue—10YR or 2.5Y
Value—2 to 6
Chroma—1 to 4
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Ap horizon:
Hue—10YR or 2.5Y
Value—2 to 6
Chroma—1 to 4
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 or 4
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BA or BE horizon (where present):
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—3 to 6
Texture—sandy loam, fine sandy loam, loam, or silt loam

Bt horizon (upper part):
Hue—7.5YR to 2.5Y
Value—5 or 6
Chroma—3 to 6
Redoximorphic features—masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Bt horizon (lower part):
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Btg horizon (where present):
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

BC horizon:
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay

BCg horizon (where present):
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay

C horizon:
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—loamy sand to clay

Cg horizon (where present):
Hue—7.5YR to 5Y
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—loamy sand to clay

State Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Loamy alluvium
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Tarboro soils, which are somewhat excessively drained and have less clay in the subsoil than the State soils
- Bojac soils, which have less clay in the subsoil than the State soils
- Altavista soils, which are moderately well drained
- Augusta soils, which are somewhat poorly drained
- Tomotley soils, which are poorly drained

Taxonomic Classification

Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

State fine sandy loam; located 0.8 mile southwest of the junction of Highways VA-35 and VA-647 at Sebrell, 1.3 miles south-southwest of the junction of Highways VA-653 and VA-719, about 1.6 miles northeast of the junction of Highway VA-653 and the Nottoway River, in cropland; elevation 43 feet; Sebrell, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 46 minutes 43.00 seconds N. and long. 77 degrees 08 minutes 19.00 seconds W.

Ap—0 to 10 inches; brown (10YR 5/3) fine sandy loam; weak fine and medium granular structure; friable, nonsticky, nonplastic; many fine and medium roots; many fine and medium high-continuity interstitial and tubular pores; few fine flakes of mica; neutral; abrupt smooth boundary.

Bt1—10 to 14 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium and coarse subangular blocky structure; friable, slightly sticky, slightly plastic; many fine and medium roots; many fine and medium high-continuity interstitial and tubular pores; common distinct strong brown (7.5YR 4/6) clay films on all faces of peds; few fine flakes of mica; moderately acid; clear wavy boundary.

Bt2—14 to 40 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium and coarse subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; many fine and medium moderate-continuity interstitial pores; common distinct clay films on all faces of peds; common fine flakes of mica; strongly acid; gradual wavy boundary.

Bt3—40 to 50 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots between peds; few fine and medium high-continuity tubular pores; common distinct clay films on all faces of peds; common fine faint reddish yellow (7.5YR 6/8) masses of oxidized iron; common fine flakes of mica; very strongly acid; clear wavy boundary.

BC—50 to 56 inches; brownish yellow (10YR 6/8) and yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium moderate-continuity interstitial pores; few distinct clay films on all faces of peds; common fine flakes of mica; strongly acid; gradual wavy boundary.

C1—56 to 64 inches; yellowish brown (10YR 5/6) and brownish yellow (10YR 6/8) sandy loam; massive; friable, nonsticky, nonplastic; common fine moderate-continuity interstitial pores; common fine flakes of mica; strongly acid; clear wavy boundary.

C2—64 to 84 inches; yellow (2.5Y 7/6) sand; single grain; loose, nonsticky, nonplastic; slightly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more

Soil reaction: Extremely acid to strongly acid in the A, E, BA, BE, and Bt horizons; extremely acid to slightly acid in the BC and C horizons

Rock fragments: 0 to 2 percent quartz gravel in the A, E, BA, BE, Bt, and BC horizons; 0 to 25 percent quartz gravel in the C horizon

Mica flakes: None to common

A or Ap horizon:

Hue—10YR or 2.5Y

Value—3 to 6

Chroma—2 to 6

Texture—loamy sand, sandy loam, fine sandy loam, or loam

E horizon (where present):
Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 6
Texture—loamy sand, sandy loam, fine sandy loam, or loam

BA or BE horizon (where present):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of brown, olive, and gray; masses of oxidized iron in shades of brown, yellow, and red in the lower part of the horizon
Texture—loam, sandy loam, sandy clay loam, or clay loam

BC horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of brown, olive, and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—2 to 8
Redoximorphic features—iron depletions in shades of brown, olive, and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture (fine-earth fraction)—sand, loamy sand, or sandy loam

Tarboro Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Sandy alluvium
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Slope range: 0 to 6 percent

Associated Soils

- Bojac and State soils, which are well drained and have more clay in the subsoil than the Tarboro soils
- Altavista soils, which are moderately well drained and have more clay in the subsoil than the Tarboro soils
- Seabrook soils, which are moderately well drained
- Buncombe soils, which are excessively drained and are on river levees
- Tomotley soils, which are poorly drained and have more clay in the subsoil than the Tarboro soils

Taxonomic Classification

Mixed, thermic Typic Udipsamments

Typical Pedon

Tarboro loamy sand; located 1.6 miles north-northwest of Courtland, 1.1 miles northwest of the junction of Highways VA-35 and VA-616, about 0.6 mile southwest of the junction of Highways VA-3 and VA-647, in woodland; elevation 37 feet; Courtland, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 44 minutes 10.00 seconds N. and long. 77 degrees 05 minutes 15.00 seconds W.

Oi—0 to 1 inch; partially decayed pine and oak litter.
A—1 to 8 inches; dark brown (10YR 3/3) loamy sand; weak fine granular structure; very friable, nonsticky, nonplastic; common very fine and fine roots; strongly acid; abrupt wavy boundary.
C1—8 to 23 inches; brownish yellow (10YR 6/6) sand; single grain; loose, nonsticky, nonplastic; common very fine and fine roots; moderately acid; gradual wavy boundary.
C2—23 to 35 inches; brownish yellow (10YR 6/8) sand; single grain; loose, nonsticky, nonplastic; few very fine roots; moderately acid; diffuse wavy boundary.
C3—35 to 56 inches; strong brown (7.5YR 5/8) sand; single grain; loose, nonsticky, nonplastic; few very fine roots; moderately acid; diffuse wavy boundary.
C4—56 to 84 inches; very pale brown (10YR 7/4) and strong brown (7.5YR 5/8) sand; single grain; loose, nonsticky, nonplastic; few very fine roots; strongly acid.

Range in Characteristics

Sandy material thickness: 80 inches or more
Soil reaction: Strongly acid to slightly acid, except where lime has been applied
Rock fragments: 0 to 20 percent quartz gravel in the C horizon

A or Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 8
Chroma—2 to 6
Texture—sand, loamy sand, or loamy fine sand

Bw horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—6 or 8
Texture—sand, loamy sand, or loamy fine sand

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 7
Chroma—2 to 8
Texture (fine-earth fraction)—sand, loamy sand, or loamy fine sand

Tomotley Series

Major land resource area: Southern Coastal Plain
Landform: Drainageways and slight depressions on stream terraces
Parent material: Loamy alluvium
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Augusta soils, which are somewhat poorly drained
- Chastain and Roanoke soils, which have more clay in the subsoil than the Tomotley soils
- Altavista soils, which are moderately well drained
- State soils, which are well drained
- Bojac soils, which are well drained and have less clay in the subsoil than the Tomotley soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, thermic Typic Endoaquults

Typical Pedon

Tomotley sandy loam; located 1.2 miles north-northwest of the junction of Highways VA-684 and VA-688, about 1.1 miles west-southwest of the junction of Highways US-58 and US-258, about 0.5 mile east-northeast of the junction of Highway VA-684 and the Seaboard Railroad, 300 feet south of the railroad, in woodland; elevation 27 feet; Franklin, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 39 minutes 35.00 seconds N. and long. 76 degrees 57 minutes 47.00 seconds W.

Ap—0 to 8 inches; very dark grayish brown (2.5Y 3/2) sandy loam; weak fine and medium granular structure; friable, nonsticky, nonplastic; many fine and medium and common coarse roots; many fine moderate-continuity interstitial pores; very strongly acid; clear wavy boundary.

Eg—8 to 12 inches; grayish brown (2.5Y 5/2) sandy loam; weak coarse subangular blocky structure; friable, nonsticky, nonplastic; many fine and medium and common coarse roots; many fine moderate-continuity interstitial pores; common medium faint light brownish gray (2.5Y 6/2) iron depletions and common medium distinct olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

Btg1—12 to 35 inches; light brownish gray (2.5Y 6/2) sandy clay loam; moderate medium and coarse subangular blocky structure; friable, slightly sticky, slightly plastic; common fine roots; common fine moderate-continuity interstitial and common fine and medium high-continuity tubular pores; common distinct continuous clay films on all faces of peds; few medium prominent olive yellow (2.5Y 6/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Btg2—35 to 48 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; common fine moderate-continuity interstitial and common fine and medium high-continuity tubular pores; common distinct continuous clay films on all faces of peds; few medium distinct olive yellow (2.5Y 6/6) masses of oxidized iron; very strongly acid; clear wavy boundary.

BCg—48 to 60 inches; light brownish gray (2.5Y 6/2) sandy loam; weak coarse subangular blocky structure; friable, nonsticky, nonplastic; few fine roots; common fine moderate-continuity interstitial pores; few distinct clay films on all faces of peds; very strongly acid; clear wavy boundary.

Cg—60 to 84 inches; gray (2.5Y 5/1) loamy coarse sand; single grain; loose, nonsticky, nonplastic; very strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more

Soil reaction: Extremely acid to strongly acid in the A, Eg, BEg, and Btg horizons; extremely acid to moderately acid in the BCg and Cg horizons

Rock fragments: 0 to 5 percent quartz gravel in the A, Eg, BEg, Btg, and BCg horizons

Mica flakes: None to common in the Btg, BCg, and Cg horizons

A or Ap horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 2 to 4
Value—2 to 4
Chroma—1 or 2
Texture—sandy loam, fine sandy loam, or loam

Eg horizon:
Hue—10YR or 2.5Y; or neutral in hue and has value of 4 to 8
Value—4 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, or loam

BEg horizon (where present):
Hue—10YR or 2.5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, or loam

Btg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

BCg horizon:
Hue—10YR to 5Y; or neutral in hue and has value of 4 to 8
Value—4 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Cg horizon:
Hue—10YR to 5Y, 5BG, and 5GY; or neutral in hue and has value of 4 to 8
Value—4 to 8
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—variable, ranging from sand to clay

Uchee Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces
Parent material: Loamy marine deposits
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 10 percent

Associated Soils

- Emporia soils, which do not have a sandy surface layer greater than 20 inches thick
- Rumford soils, which do not have a sandy surface layer greater than 20 inches thick and have less clay throughout the subsoil and substratum than the Uchee soils
- Slagle soils, which are moderately well drained and do not have a sandy surface layer greater than 20 inches thick
- Udorthents, which lack well developed or defined horizons

Taxonomic Classification

Loamy, kaolinitic, thermic Arenic Kanhapludults

Typical Pedon

Uchee loamy fine sand; located 1.2 miles northwest of Carsley, 1.2 miles east-northeast of the junction of Highways VA-40 and VA-612, about 0.7 mile south of the junction of Highways VA-40 and VA-615, in a stand of loblolly pines; elevation 120 feet; Waverly, VA, 7.5-minute USGS topographic quadrangle; Surry County, Virginia, NAD27; lat. 37 degrees 06 minutes 0.00 second N. and long. 77 degrees 01 minute 24.00 seconds W.

A—0 to 6 inches; dark grayish brown (10YR 4/2) loamy fine sand; weak fine granular structure; loose, nonsticky, nonplastic; many fine roots; very strongly acid; clear smooth boundary.

E—6 to 34 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; loose, nonsticky, nonplastic; many fine roots; strongly acid; clear smooth boundary.

Bt1—34 to 54 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few distinct clay films on all faces of peds and common distinct clay bridges between sand grains; common medium prominent very pale brown (10YR 7/4) masses of oxidized iron; strongly acid; gradual smooth boundary.

Bt2—54 to 72 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few distinct clay films on all faces of peds and common distinct clay bridges between sand grains; common medium prominent gray (10YR 6/1) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches or more
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Rock fragments: 0 to 15 percent gravel and ironstone fragments

A horizon:
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 4
Texture—sand, loamy sand, or loamy fine sand

Ap horizon (where present):
Hue—10YR or 2.5Y
Value—3 to 6
Chroma—2 to 4
Texture—sand, loamy sand, or loamy fine sand

E horizon:
Hue—10YR or 2.5Y
Value—4 to 7

Chroma—3 to 6
Texture—sand, loamy sand, or loamy fine sand

BE horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—4 to 8
Texture—loamy sand or sandy loam

Bt horizon (upper part):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—4 to 8
Redoximorphic features—masses of oxidized iron in shades of brown and yellow
Texture—sandy clay loam, sandy clay, or clay

Bt horizon (lower part):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—sandy clay loam, sandy clay, or clay

BC horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—4 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—loamy sand, sandy loam, or sandy clay loam

C horizon (where present):
Hue—7.5YR or 10YR
Value—5 to 7
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of gray; masses of oxidized iron in shades of red, brown, and yellow
Texture—loamy sand or sandy loam; pockets or strata of coarser or finer materials in many pedons

Warne Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Clayey alluvium
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Slope range: 0 to 2 percent

Associated Soils

- Augusta soils, which have less clay in the subsoil than the Warne soils
- Craven soils, which are moderately well drained
- Roanoke soils, which are poorly drained
- Tomotley soils, which are poorly drained and have less clay in the subsoil than the Warne soils

Taxonomic Classification

Fine, mixed, semiactive, thermic Aeric Endoaquults

Typical Pedon

Warne fine sandy loam; located near King and Queen Court House Fire Station, 375 feet southwest of the junction of VA-14 and VA-617 on VA-14, about 300 feet southwest of VA-14, just east of a power line, in cropland; elevation 27 feet; Truhard, VA, 7.5-minute USGS topographic quadrangle; King and Queen County, Virginia; NAD27; lat. 37 degrees 40 minutes 13.00 seconds N. and long. 76 degrees 52 minutes 23.00 seconds W.

Ap—0 to 5 inches; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable, slightly sticky, slightly plastic; common fine and medium roots; moderately acid; abrupt smooth boundary.

E—5 to 11 inches; pale brown (10YR 6/3) sandy loam; weak fine granular structure; very friable, slightly sticky, slightly plastic; common fine and medium roots; few fine vesicular pores; common medium faint grayish brown (10YR 5/2) iron depletions; moderately acid; abrupt smooth boundary.

Btg1—11 to 19 inches; light brownish gray (10YR 6/2) clay; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; common fine and few medium roots; many faint clay films on all faces of peds; common fine distinct brownish yellow (10YR 6/6) masses of oxidized iron; strongly acid; clear wavy boundary.

Btg2—19 to 38 inches; light brownish gray (10YR 6/2) clay; moderate medium subangular blocky structure; friable, moderately sticky, moderately plastic; few fine and medium roots; common faint clay films on all faces of peds; strongly acid; gradual wavy boundary.

Cg1—38 to 48 inches; grayish brown (2.5Y 5/2) loamy sand; massive; friable; few fine lenses of sandy clay; very strongly acid; gradual wavy boundary.

Cg2—48 to 62 inches; grayish brown (2.5Y 5/2) loamy coarse sand; single grain; loose; very strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more

Reaction: Very strongly acid to moderately acid in the A and E horizons, except where lime has been applied; extremely acid to strongly acid in the B, BC, and C horizons

Ap horizon:

Hue—10YR or 2.5Y; or neutral in hue and has value of 2 to 5
Value—2 to 5
Chroma—1 to 3
Texture—sandy loam, fine sandy loam, loam, or silt loam

E horizon:

Hue—10YR or 2.5Y
Value—5 to 7
Chroma—2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

Bt horizon (where present):

Hue—10YR or 2.5Y
Value—5 to 7
Chroma—3 to 8
Texture—sandy clay loam, clay loam, sandy clay, clay, or silty clay

Btg horizon:

Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—clay loam, sandy clay, clay, or silty clay

BCg horizon (where present):

Hue—10YR to 5Y; or neutral in hue and has value of 4 to 7
Value—4 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—fine sandy loam, sandy clay loam, clay loam, silty clay loam, or sandy clay

Cg horizon:

Hue—10YR to 5Y; or neutral in hue and has value of 5 to 7
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand to clay; commonly stratified

Yemassee Series

Major land resource area: Southern Coastal Plain
Landform: Marine terraces and depressions
Parent material: Loamy marine deposits
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Slope range: 0 to 2 percent

Associated Soils

- Emporia soils, which are well drained
- Slagle soils, which are moderately well drained
- Myatt soils, which are poorly drained
- Roanoke soils, which are poorly drained and have more clay in the subsoil than the Yemassee soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, thermic Aeric Endoaquults

Typical Pedon

Yemassee fine sandy loam; located 1.3 miles southeast of the junction of Highway VA-35 and the Sussex County line, 1.1 miles west-northwest of the junction of Highways VA-606 and VA-607, about 0.9 mile east of the south junction of Highways VA-35 and VA-607, in woodland; elevation 45 feet; Vicksville, VA, 7.5-minute USGS topographic quadrangle; Southampton County, Virginia; NAD27; lat. 36 degrees 50 minutes 25.00 seconds N. and long. 77 degrees 06 minutes 51.00 seconds W.

A—0 to 4 inches; grayish brown (10YR 5/2) fine sandy loam; weak medium granular structure; friable, slightly sticky, slightly plastic; many very fine and fine, common medium, and few coarse roots; common medium moderate-continuity tubular pores; very strongly acid; clear smooth boundary.

E—4 to 15 inches; pale brown (10YR 6/3) fine sandy loam; weak fine granular structure; friable, slightly sticky, slightly plastic; many very fine and fine and few medium and coarse roots; common medium moderate-continuity tubular pores; few medium prominent strong brown (7.5YR 5/8) and common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; clear smooth boundary.

Btg—15 to 40 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable, moderately sticky, moderately plastic; few very fine and fine roots; common fine and medium high-continuity tubular pores; common distinct continuous clay films on surfaces along root channels and on all faces of peds; common medium prominent strong brown (7.5YR 5/8) and common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; clear smooth boundary.

BCg—40 to 60 inches; gray (10YR 6/1) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; common very fine and fine moderate-continuity tubular pores; few faint patchy clay films on all faces of peds; few medium distinct yellowish brown (10YR 5/6), few fine prominent red (10R 4/8), and common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 70 inches or more

Soil reaction: Extremely acid to slightly acid in the A and E horizons; extremely acid to strongly acid in the Bt, Btg, BCg, and Cg horizons

A or Ap horizon:

Hue—10YR or 2.5Y; or neutral in hue and has value of 2 to 5
Value—2 to 5
Chroma—1 or 2
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:

Hue—10YR or 2.5Y
Value—5 to 7
Chroma—2 to 4
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Bt horizon (where present):

Hue—10YR or 2.5Y
Value—5 or 6
Chroma—3 to 8
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, sandy clay loam, or clay loam

Btg horizon:

Hue—7.5YR to 2.5Y; or neutral in hue and has value of 5 to 7
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, fine sandy loam, sandy clay loam, or clay loam

BCg horizon:

Hue—10YR or 2.5Y; or neutral in hue and has value of 5 to 7
Value—5 to 7

Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sandy loam, sandy clay loam, or clay loam

Cg horizon (where present):
Hue—10YR to 5Y; or neutral in hue and has value of 5 to 7
Value—5 to 7
Chroma—1 or 2
Redoximorphic features—iron depletions in shades of olive and gray; masses of oxidized iron in shades of brown, yellow, and red
Texture—sand to clay

Formation of the Soils

This section describes the factors and processes that have affected the formation and morphology of the soils in Sussex County.

Factors of Soil Formation

Soils are intimate mixtures of broken and partly or completely weathered rock, minerals, organic matter, living plants and animals, water, and air (Soil Survey Division Staff, 1993). They occur as part of the natural landscape and differ from place to place. They differ in occurrence, in degree of development of various horizons, in mineral content, in depth over bedrock, and in texture, color, and slope. The characteristics of the soils in any given area depend upon the interaction of the five factors of soil formation, which are parent material, climate, living organisms, topography, and time. Topography over time modifies the effect of climate and living organisms on parent material (Jenny, 1941).

In theory, if all soil forming factors were identical at different sites, the soils at these sites would be identical. Although all of these factors influence the genesis of every soil, the relative importance of each factor varies from place to place. One factor may outweigh the others in the formation of a soil and may determine most of its properties. For example, very young soils on flood plains may have only faint soil horizonation because soil-forming factors have been active for only a short time. In contrast, soils formed in residuum from bedrock on a stable landscape may have distinct horizons. The horizons are distinct because the soil material has remained largely in place and all the soil-forming factors have been active for a long time. In general, however, the combined action of the five factors determines the character of each soil. The interaction of the five factors of soil formation is more complex for some soils than for others.

Parent Material

Parent material is the material in which a soil forms. The two broad classes of parent material in the survey are residual material and transported material.

Residual material has weathered in place from underlying bedrock. The characteristics of the residual parent material are related directly to the characteristics of the underlying bedrock. Residual soils occur in the Piedmont portion of the county. Appling and Georgeville soils are examples.

Transported material includes alluvial sediments that were moved by water and laid down as unconsolidated deposits of sand, silt, clay, and rock fragments. Alluvial sediments are materials transported by floodwaters and deposited on the flood plains of streams. Marine sediments are materials deposited into the ocean that once covered the Coastal Plain portion of the county millions of years ago. The Coastal Plain portion of the county contains alluvial and marine sediments. Alluvial deposits also occur in the Piedmont. Bibb and Buncombe soils are examples of alluvial soils on flood plains. Craven and Emporia soils are examples of soils that formed in marine deposits.

Climate

Climate affects the physical, chemical, and biological relationships in soils, principally through the influence of precipitation and temperature. Water dissolves minerals, supports biological activity, and transports mineral and organic residue through the solum. Temperature determines the type and rate of physical, chemical, and biological activities.

Precipitation, which exceeds evapotransporation during the growing season, has caused the soils to become leached in the humid climate. Most of the soluble materials originally in the soil or released through weathering have been removed. Exceptions to this are alluvial soils, such as the Bibb soils, which are recharged with eroded sediments from surrounding uplands. Precipitation primarily is responsible for the subsoil that characterizes most soils in the survey area. In addition to leaching soluble materials, water that moves through the soil moves clay from the surface layer to the subsoil. Except for soils formed in recent alluvium or sand or on very steep slopes, the soils in the survey area generally have subsoils that contain more clay than the surface layer.

The climate also influences the formation of the blocky structure in the subsoil of well developed soils. The development of peds (aggregates) in the subsoil is caused partly by changes in volume of the soil mass that are primarily the result of alternate wetting and drying.

Living Organisms

Micro-organisms, vegetation, animals, and humans are major factors in the formation of soils. Vegetation generally is responsible for the amount of organic matter and nutrients and the color of the surface layer. Earthworms, cicada, and burrowing animals help keep the soil open and porous. Micro-organisms decompose the vegetation and dead animal matter, which releases nutrients for plant food. Humans have changed the soil by mixing the upper layers.

Before settlement by humans, native vegetation, mainly oaks, hickories, and pines, was the major living organism that affected soil development. Most hardwoods use a large amount of the available calcium and other bases and constantly recycle them through leaf fall and decay. This has prevented the soils in the survey area from becoming as leached as they would have been under a coniferous forest cover. Also, since the soils form under forest vegetation, rapid decay of organic matter and constant recycling of nutrients have prevented organic matter accumulation in large quantities. In addition, the climate favors rapid decay of plant materials, oxidation of organic matter, and leaching of nutrients.

Humans have influenced soil development by clearing forests, cultivating crops, introducing new plants, and changing natural drainage. Humans have also affected the soil in other important ways, such as mixing the upper layers of the soils to form a plow layer, accelerating erosion by cultivating steep slopes, and applying lime and fertilizer to change the fertility of the soils.

Topography

The underlying geologic formations, the geologic history of the general region, and the effects of dissection by rivers and streams largely determine the relief of an area. Relief, or topography, affects the formation of soils by influencing the quantity of water infiltration, the rate of surface water runoff, the rate of drainage in the soil, the soil temperature, and the rate of geologic erosion. Relief can alter the effects of climate on the parent material to the extent that several different kinds of soils may form from the same kind of parent material. Relief also affects the amount of radiant energy absorbed by the soils, which in turn affects the type of native vegetation on the soils.

Relief in Sussex County ranges from nearly level to very steep. The nearly level soils are common on upland flats, on flood plains of streams, and in marshes. Most of the nearly level soils are often wet because of frequent flooding or a seasonal high water table. The surface water runoff generally is slow. These soils generally have a subsoil or substratum that is gray or mottled gray, and the soils are somewhat poorly drained or poorly drained. Bibb soils are an example.

The gently sloping to very steep soils generally are well drained or moderately well drained. On the gently sloping and sloping soils, geologic erosion is slight, surface water runoff is medium to rapid, and water infiltration is optimum. Translocation of bases and clay generally has occurred downward through the soil. However, on the steeper soils, surface runoff is very rapid, water infiltration and translocation of clay and bases through the soil are reduced, and the erosion hazard is severe.

In most upland areas, the parent materials and other soil-forming factors are essentially the same and relief has modified the effects of the other soil-forming factors. For example, Emporia and Slagle soils formed in similar parent materials, yet the Emporia soils, which are slightly higher on the landscape, are well drained while the adjacent Slagle soils are moderately well drained.

Time

As a factor of soil formation, time generally is related to the degree of development or degree of horizon differentiation within the soil. A soil that has little or no horizon development is considered a young soil, and one that has strongly developed horizons is considered an old or mature soil.

The oldest soils in Sussex County are those formed on well drained uplands at the higher elevations. These older soils, such as Georgeville, Appling, Emporia, and Kemspville soils, have a strong degree of horizon differentiation. Conversely, Bibb and Nawney soils formed in recent alluvium and show little or no horizon development. They are commonly stratified and have an irregular distribution of organic matter in the profile.

Morphology of the Soils

The results of the soil-forming factors are shown by the different layers, or soil horizons, in a soil profile. The soil profile extends from the surface down to materials that are little altered by the soil-forming processes.

Most soils have four major horizons—the A, E, B, and C horizons. These major horizons may be further subdivided by the use of numbers and letters to indicate changes within a horizon. An example would be the Bt horizon, which is a B horizon that has an accumulation of clay.

The *A horizon* is the surface layer and has the largest accumulation of organic matter of all horizons. The A horizon is also the layer of maximum leaching and elluviation of clay and iron. If considerable leaching has taken place and organic matter has not darkened the material, this horizon is called an *E horizon*.

The *B horizon* underlies the A or E horizon and is commonly called the subsoil. It is the horizon of maximum accumulation, or illuviation, of clay, iron, aluminum, and other compounds leached from the surface layer. In some soils, the B horizon formed by alteration in place rather than by illuviation. This alteration can be caused by oxidation and reduction of iron or by the weathering of clay minerals. The B horizon generally has a blocky structure, and it generally is firmer and lighter in color than the A and E horizons but darker than the C horizon.

The *C horizon* is below the B horizon or, in some cases, below the A horizon. It consists of materials that are little altered by the soil-forming processes but can be modified by weathering.

Processes of Horizon Differentiation

In Sussex County, several processes are involved in the formation of soil horizons. Among these are the accumulation of organic matter, the leaching of soluble salts, the reduction and transfer of iron, the formation of soil structure, and the formation and translocation of clay minerals. These processes are continually taking place, generally at the same time throughout the profile. Such processes have been going on for thousands of years.

The accumulation of organic matter and its incorporation into the soil take place as plant residue decomposes. These additions darken the surface layer and help to form the A horizon. In many places, much of the surface layer has been eroded away or has been mixed with the materials from underlying layers through cultivation. Organic matter, once lost, normally takes a long time to replace. In Sussex County, the organic matter content of the surface layer ranges from low in sandy soils, such as Buncombe soils, to high in marsh soils, such as Mattan soils. Most soils in the county have a low or medium amount of organic matter.

For soils to have distinct subsoil horizons, some of the lime and soluble salts must be leached before the translocation of clay minerals. Among the factors that affect this leaching are the kinds of salts originally present, the depth to which the soil solution permeates the soil, and the texture of the soil profile.

Well drained and moderately well drained soils in the survey area have a yellowish brown to red subsoil. These colors are caused mainly by thin coatings of iron oxides on sand and silt grains, although in some soils the colors are inherited from the materials in which they formed. These soils have a weak or moderate subangular blocky structure and the subsoil contains more clay than the overlying surface horizons.

The reduction and transfer of iron, called gleying, takes place mainly in the wetter, more poorly drained soils. Moderately well drained to somewhat poorly drained soils, such as Slagle and Augusta soils, have yellowish brown and strong brown redoximorphic features, which indicate the segregation of iron. In poorly drained soils, such as Bibb and Chastain soils, the subsoil and underlying materials are grayish, which indicates reduction and transfer of iron by removal in solution.

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.
Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.
Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.
Cropping system. Growing crops according to a planned system of rotation and management practices.
Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.
Crown. The upper part of a tree or shrub, including the living branches and their foliage.
Crusts. Relatively thin, somewhat continuous layers of the soil surface that often restrict water movement, air entry, and seedling emergence. These layers generally are less than 2 inches thick and are massive.
Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.
Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.
Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.
Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.
Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.
Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.
Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat*

poorly drained, poorly drained, and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flooding frequency class. The number of times flooding occurs over a period of time, expressed as a class. The classes of flooding are defined as follows:

None. —No reasonable possibility of flooding; near 0 percent chance of flooding in any year or less than 1 time in 500 years.

Very rare. —Flooding is very unlikely but possible under extremely unusual weather conditions; less than a 1 percent chance of flooding in any year or less than 1 time in 100 years, but at least 1 time in 500 years.

Rare. —Flooding unlikely but possible under unusual weather conditions; a 1 to 5 percent chance of flooding in any year or nearly 1 to 5 times in 100 years.

Occasional. —Flooding is expected infrequently under usual weather conditions; a 5 to 50 percent chance of flooding in any year or 5 to 50 times in 100 years.

Frequent. —Flooding is likely to occur often under usual weather conditions; more than a 50 percent chance of flooding in any year or more than 50 times in 100 years, but less than a 50 percent chance of flooding in all months in any year.

Very frequent. —Flooding is likely to occur very often under usual weather conditions; more than a 50 percent chance of flooding in all months of any year.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Knoll. A small, low, rounded hill rising above adjacent landforms.
Ksat. See Saturated hydraulic conductivity.
Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.
Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.
Leaching. The removal of soluble material from soil or other material by percolating water.
Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.
Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.
Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.
Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.
Low strength. The soil is not strong enough to support loads.
Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.
Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.
Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.
Masses. See Redoximorphic features.
Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.
Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.
Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.
Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.
Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.
Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.
Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.
Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

n-value. The relationship between the percentage of water under field conditions and the percentages of inorganic clay and humus.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent

Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:

   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat). The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are *very high*, 100 or more micrometers per second (14.17 or more inches per hour); *high*, 10 to 100 micrometers per second (1.417 to 14.17 inches per hour); *moderately high*, 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour); *moderately low*, 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour); *low*, 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour); and *very low*, less than 0.01 micrometer per second (less than 0.001417 inch per hour). To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 6 percent
Strongly sloping	6 to 10 percent
Moderately steep	10 to 15 percent
Steep	15 to 25 percent
Very steep	25 percent and higher

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/ or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted water transmission in the soil.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial.

Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion. A low stream terrace is susceptible to flooding and a high stream terrace is not susceptible to flooding.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Temperature and Precipitation

(Recorded in the period 1971-2000 at Wakefield, Virginia)

Month	Temperature: Average daily maximum	Temperature: Average daily minimum	Temperature: Average	Temperature: 2 years in 10 will have-- Maximum temperature higher than--	Temperature: 2 years in 10 will have-- Minimum temperature lower than--	Temperature: Average number of growing degree days*	Precipitation: Average	Precipitation: 2 years in 10 will have-- Less than--	Precipitation: 2 years in 10 will have-- More than--	Precipitation: Average number of days with 0.10 inch or more	Precipitation: Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	49.0	28.3	38.6	74	3	18	4.15	2.51	5.65	6	2.4
February----	51.7	30.4	41.0	76	9	28	2.98	1.69	4.24	6	1.7
March-------	60.1	36.3	48.2	85	17	95	4.45	2.60	6.07	7	0.0
April-------	69.4	44.3	56.8	89	27	235	3.45	1.33	5.57	5	0.0
May---------	77.3	53.9	65.6	94	37	487	3.69	2.16	5.29	7	0.0
June--------	84.9	63.2	74.0	96	46	721	3.83	1.60	5.56	6	0.0
July--------	89.4	68.8	79.1	100	56	884	5.15	2.36	7.77	7	0.0
August------	86.9	66.3	76.6	98	50	825	4.54	1.93	6.94	5	0.0
September---	81.5	59.1	70.3	96	40	607	5.24	1.73	7.97	5	0.0
October-----	72.2	47.2	59.7	88	30	302	2.83	1.10	4.65	3	0.0
November----	62.5	38.4	50.5	81	20	119	2.73	1.35	4.08	5	0.1
December----	51.7	30.5	41.1	76	10	35	2.65	1.33	3.96	5	0.4
Yearly:											
Average---	69.7	47.2	58.5	---	---	---	---	---	---	---	---
Extreme---	105	-8	---	101	0	---	---	---	---	---	---
Total-----	---	---	---	---	---	4356	45.69	32.44	51.16	67	4.6

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Wakefield, Virginia)

Probability	Temperature 24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Mar. 30	Apr. 3	Apr. 21
2 year in 10 later than--	Mar. 24	Mar. 30	Apr. 17
5 year in 10 later than--	Mar. 12	Mar. 22	Apr. 8
First freezing temperature in fall:			
1 yr in 10 earlier than--	Nov. 5	Oct. 23	Oct. 13
2 yr in 10 earlier than--	Nov. 12	Oct. 28	Oct. 18
5 yr in 10 earlier than--	Nov. 25	Nov. 7	Oct. 29

Growing Season

(Recorded for the period 1971-2000 at Wakefield, VA)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	229	221	186
8 years in 10	238	225	192
5 years in 10	254	233	205
2 years in 10	270	241	218
1 year in 10	279	246	224

Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1A	Altavista fine sandy loam, 0 to 2 percent slopes, rarely flooded	5,591	1.8
1B	Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded	563	0.2
2B	Appling sandy loam, 2 to 7 percent slopes	233	*
2C	Appling sandy loam, 7 to 15 percent slopes	414	0.1
3A	Augusta sandy loam, 0 to 2 percent slopes, rarely flooded	4,833	1.5
4A	Bibb and Chastain soils, 0 to 2 percent slopes, frequently flooded	7,415	2.3
5A	Bojac loamy sand, 0 to 2 percent slopes, rarely flooded	422	0.1
6A	Buncombe loamy sand, 0 to 2 percent slopes, occasionally flooded	794	0.3
7A	Chastain loam, 0 to 2 percent slopes, frequently flooded	25,285	8.0
8A	Chewacla loam, 0 to 2 percent slopes, occasionally flooded	4,886	1.5
9A	Craven loam, 0 to 2 percent slopes	1,636	0.5
9B	Craven loam, 2 to 6 percent slopes	10,259	3.3
10C3	Craven clay loam, 6 to 10 percent slopes, severely eroded	13,673	4.3
11A	Dogue loam, 0 to 2 percent slopes	1,834	0.6
11B	Dogue loam, 2 to 6 percent slopes	319	0.1
12A	Emporia-Slagle complex, 0 to 2 percent slopes	12,068	3.8
12B	Emporia-Slagle complex, 2 to 6 percent slopes	14,017	4.4
12C	Emporia-Slagle complex, 6 to 10 percent slopes	9,500	3.0
13A	Eulonia fine sandy loam, 0 to 2 percent slopes	5,893	1.9
13B	Eulonia fine sandy loam, 2 to 6 percent slopes	4,808	1.5
13C	Eulonia fine sandy loam, 6 to 10 percent slopes	2,298	0.7
14B	Faceville fine sandy loam, 2 to 6 percent slopes	948	0.3
14C	Faceville fine sandy loam, 6 to 10 percent slopes	240	*
15B	Georgeville silt loam, 2 to 7 percent slopes	93	*
15C	Georgeville silt loam, 7 to 15 percent slopes	144	*
15D	Georgeville silt loam, 15 to 25 percent slopes	942	0.3
16B	Helena loam, 2 to 7 percent slopes	971	0.3
16C	Helena loam, 7 to 15 percent slopes	1,081	0.3
17A	Myatt loam, 0 to 2 percent slopes	12,559	4.0
18B	Nansemond sandy loam, 0 to 4 percent slopes	829	0.3
19A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	1,361	0.4
20D	Nevarc and Emporia soils, 10 to 15 percent slopes	3,725	1.2
20F	Nevarc and Emporia soils, 15 to 50 percent slopes	371	0.1
21B	Ocilla loamy sand, 0 to 6 percent slopes	13,239	4.2
22A	Roanoke loam, 0 to 2 percent slopes, frequently flooded	18,426	5.8
23B	Rumford-Uchee complex, 2 to 6 percent slopes	2,156	0.7
24A	Seabrook sand, 0 to 2 percent slopes	4,401	1.4
25A	Slagle fine sandy loam, 0 to 2 percent slopes	30,594	9.7
25B	Slagle fine sandy loam, 2 to 6 percent slopes	39,057	12.4
26A	State sandy loam, 0 to 2 percent slopes, rarely flooded	1,626	0.5
27B	Tarboro loamy sand, 0 to 6 percent slopes, rarely flooded	3,650	1.2
28A	Tomotley sandy loam, 0 to 2 percent slopes, rarely flooded	7,368	2.3
29B	Uchee loamy sand, 0 to 6 percent slopes	11,550	3.7
30C	Uchee-Slagle complex, 6 to 10 percent slopes	5,905	1.9
31	Udorthents, 0 to 25 percent slopes	1,887	0.6
32A	Warne fine sandy loam, 0 to 2 percent slopes, rarely flooded	4,310	1.4
33A	Yemassee fine sandy loam, 0 to 2 percent slopes	19,029	6.0
W	Water	2,397	0.8
	Total	315,600	100.0

* Less than 0.1 percent.

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part I

Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.

Map symbol and soil name	Land capability	Virginia Soil Management Group	Corn	Grass-legume hay	Peanuts	Soybeans	Wheat
			Bu	Tons	Lbs	Bu	Bu
1A:							
Altavista---------	2w	B	160	4.5	---	50	64
1B:							
Altavista---------	2e	B	160	4.5	---	50	64
2B:							
Appling-----------	2e	V	100	3.5	---	35	56
2C:							
Appling-----------	3e	V	88	3.1	---	31	49
3A:							
Augusta-----------	4w	Z	100	2.0	2800	35	40
4A:							
Bibb--------------	6w	EE	---	---	---	---	---
Chastain----------	7w	LL	---	---	---	---	---
5A:							
Bojac-------------	2s	DD	85	3.5	4100	25	56
6A:							
Buncombe----------	4s	II	65	3.0	---	20	48
7A:							
Chastain----------	7w	LL	---	---	---	---	---
8A:							
Chewacla----------	4w	I	140	4.5	---	40	64
9A:							
Craven------------	2w	HH	85	3.0	2900	25	48
9B:							
Craven------------	2e	HH	85	3.0	2900	25	48
10C3:							
Craven------------	4e	HH	52	2.0	2000	11	30
11A:							
Dogue-------------	2w	K	130	4.0	3500	40	64
11B:							
Dogue-------------	2e	K	130	4.0	3500	40	64
12A:							
Emporia-----------	1	R	120	4.0	4000	40	56
Slagle------------	2w	K	130	4.5	3500	40	64
12B:							
Emporia-----------	2e	R	120	4.0	4000	40	56
Slagle------------	2e	K	130	4.0	3500	40	64

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part I—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Corn	Grass-legume hay	Peanuts	Soybeans	Wheat
			Bu	Tons	Lbs	Bu	Bu
12C:							
Emporia-----------	3e	R	106	3.5	3700	35	49
Slagle------------	3e	K	114	4.0	3000	35	56
13A:							
Eulonia-----------	2w	K	130	4.5	3500	40	64
13B:							
Eulonia-----------	2e	K	130	4.5	3500	40	64
13C:							
Eulonia-----------	3e	K	114	4.0	2500	35	56
14B:							
Faceville---------	2e	R	120	4.0	4000	40	56
14C:							
Faceville---------	3e	R	106	3.5	2600	35	49
15B:							
Georgeville-------	2e	X	100	3.5	---	35	56
15C:							
Georgeville-------	3e	X	88	3.1	---	31	49
15D:							
Georgeville-------	4e	X	80	2.8	---	28	45
16B:							
Helena------------	2e	KK	65	3.0	---	20	32
16C:							
Helena------------	3e	KK	57	2.6	---	18	28
17A:							
Myatt-------------	4w	OO	65	2.0	---	20	24
18B:							
Nansemond---------	2e	F	140	3.5	3900	40	64
19A:							
Nawney------------	7w	PP	---	---	---	---	---
Mattan------------	7w	PP	---	---	---	---	---
20D:							
Nevarc------------	4e	HH	68	2.4	---	20	38
Emporia-----------	4e	S	96	2.8	---	32	45
20F:							
Nevarc------------	7e	HH	---	---	---	---	---
Emporia-----------	7e	S	---	---	---	---	---
21B:							
Ocilla------------	4w	DD	85	3.5	4100	25	56

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part I—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Corn	Grass-legume hay	Peanuts	Soybeans	Wheat
			Bu	Tons	Lbs	Bu	Bu
22A:							
Roanoke-----------	7w	NN	---	---	---	---	---
23B:							
Rumford-----------	2e	DD	85	3.5	3000	25	56
Uchee-------------	3s	DD	85	3.5	3000	25	56
24A:							
Seabrook----------	3s	EE	85	2.0	---	25	48
25A:							
Slagle------------	2w	K	130	4.5	3500	40	64
25B:							
Slagle------------	2e	K	130	4.0	3500	40	64
26A:							
State-------------	1	B	160	6.0	3300	50	64
27B:							
Tarboro-----------	4s	II	65	2.0	2000	20	48
28A:							
Tomotley----------	4w	OO	65	2.0	---	20	24
29B:							
Uchee-------------	3s	DD	85	3.5	3000	25	56
30C:							
Uchee-------------	4s	DD	75	3.1	2700	22	49
Slagle------------	3e	K	130	4.0	3500	40	64
31:							
Udorthents--------	---		---	---	---	---	---
32A:							
Warne-------------	4w	OO	65	2.0	---	20	24
33A:							
Yemassee----------	4w	OO	65	2.0	---	20	24

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part II

Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.

Map symbol and soil name	Land capability	Virginia Soil Management Group	Pasture
			AUM
1A:			
Altavista---------	2w	B	9.0
1B:			
Altavista---------	2e	B	9.0
2B:			
Appling-----------	2e	V	6.5
2C:			
Appling-----------	3e	V	5.5
3A:			
Augusta-----------	4w	Z	4.0
4A:			
Bibb--------------	6w	EE	3.0
Chastain----------	7w	LL	---
5A:			
Bojac-------------	2s	DD	6.0
6A:			
Buncombe----------	4s	II	4.0
7A:			
Chastain----------	7w	LL	---
8A:			
Chewacla----------	4w	I	7.5
9A:			
Craven------------	2w	HH	6.0
9B:			
Craven------------	2e	HH	6.0
10C3:			
Craven------------	4e	HH	4.0
11A:			
Dogue-------------	2w	K	10.0
11B:			
Dogue-------------	2e	K	10.0
12A:			
Emporia-----------	1	R	8.0
Slagle------------	2w	K	10.0

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part II—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Pasture
			AUM
12B:			
Emporia	2e	R	8.0
Slagle	2e	K	10.0
12C:			
Emporia	3e	R	7.0
Slagle	3e	K	9.0
13A:			
Eulonia	2w	K	10.0
13B:			
Eulonia	2e	K	10.0
13C:			
Eulonia	3e	K	9.0
14B:			
Faceville	2e	R	6.0
14C:			
Faceville	3e	R	5.5
15B:			
Georgeville	2e	X	6.0
15C:			
Georgeville	3e	X	5.5
15D:			
Georgeville	4e	X	4.5
16B:			
Helena	2e	KK	4.0
16C:			
Helena	3e	KK	3.5
17A:			
Myatt	4w	OO	2.5
18B:			
Nansemond	2e	F	9.0
19A:			
Nawney	7w	PP	---
Mattan	7w	PP	---
20D:			
Nevarc	4e	HH	4.0
Emporia	4e	S	4.5

Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture, Part II—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Pasture
			AUM
20F:			
Nevarc	7e	HH	---
Emporia	7e	S	---
21B:			
Ocilla	4w	DD	5.5
22A:			
Roanoke	7w	NN	---
23B:			
Rumford	2e	DD	8.0
Uchee	3s	DD	7.0
24A:			
Seabrook	3s	EE	2.5
25A:			
Slagle	2w	K	10.0
25B:			
Slagle	2e	K	10.0
26A:			
State	1	B	10.0
27B:			
Tarboro	4s	II	2.5
28A:			
Tomotley	4w	OO	2.5
29B:			
Uchee	3s	DD	7.0
30C:			
Uchee	4s	DD	6.0
Slagle	3e	K	10.0
31:			
Udorthents	---		---
32A:			
Warne	4w	OO	2.5
33A:			
Yemassee	4w	OO	2.5

Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Map unit name
1A	Altavista fine sandy loam, 0 to 2 percent slopes, rarely flooded
1B	Altavista fine sandy loam, 2 to 6 percent slopes, rarely flooded
2B	Appling sandy loam, 2 to 7 percent slopes
3A	Augusta sandy loam, 0 to 2 percent slopes, rarely flooded (prime farmland if drained)
5A	Bojac loamy sand, 0 to 2 percent slopes, rarely flooded
9A	Craven loam, 0 to 2 percent slopes
9B	Craven loam, 2 to 6 percent slopes
11A	Dogue loam, 0 to 2 percent slopes
11B	Dogue loam, 2 to 6 percent slopes
12A	Emporia-Slagle complex, 0 to 2 percent slopes
12B	Emporia-Slagle complex, 2 to 6 percent slopes
13A	Eulonia fine sandy loam, 0 to 2 percent slopes
13B	Eulonia fine sandy loam, 2 to 6 percent slopes
14B	Faceville fine sandy loam, 2 to 6 percent slopes
15B	Georgeville silt loam, 2 to 7 percent slopes
16B	Helena loam, 2 to 7 percent slopes
17A	Myatt loam, 0 to 2 percent slopes (prime farmland if drained)
18B	Nansemond sandy loam, 0 to 4 percent slopes
25A	Slagle fine sandy loam, 0 to 2 percent slopes
25B	Slagle fine sandy loam, 2 to 6 percent slopes
26A	State sandy loam, 0 to 2 percent slopes, rarely flooded
28A	Tomotley sandy loam, 0 to 2 percent slopes, rarely flooded (prime farmland if drained)
33A	Yemassee fine sandy loam, 0 to 2 percent slopes (prime farmland if drained)

Hydric Soils List

Map symbol	Soil name
4A	Bibb and Chastain soils, 0 to 2 percent slopes, frequently flooded
7A	Chastain loam, 0 to 2 percent slopes, frequently flooded
17A	Myatt loam, 0 to 2 percent slopes
19A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded
22A	Roanoke loam, 0 to 2 percent slopes, frequently flooded
28A	Tomotley sandy loam, 0 to 2 percent slopes, rarely flooded

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Application of manure and food-processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
			Flooding	0.40
2B:				
Appling	Somewhat limited		Very limited	
	Too acid	0.68	Too acid	1.00
	Low adsorption	0.31		
2C:				
Appling	Somewhat limited		Very limited	
	Too acid	0.68	Too acid	1.00
	Slope	0.37	Slope	0.37
	Low adsorption	0.31		
3A:				
Augusta	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Too acid	1.00
			Flooding	0.40
4A:				
Bibb	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Too acid	0.68	Too acid	1.00
Chastain	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Slow water movement	1.00
5A:				
Bojac	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.01	Flooding	0.40
			Too acid	0.03
6A:				
Buncombe	Very limited		Very limited	
	Filtering capacity	0.99	Flooding	1.00
	Droughty	0.91	Too acid	1.00
	Too acid	0.68	Filtering capacity	0.99

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
7A:				
Chastain------------	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Slow water movement	1.00
8A:				
Chewacla------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Flooding	1.00
	Flooding	0.60	Too acid	1.00
9A, 9B:				
Craven--------------	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Slow water movement	0.75	Slow water movement	0.61
	Too acid	0.11	Too acid	0.42
10C3:				
Craven--------------	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Too acid	0.99
	Slow water movement	0.75	Depth to saturated zone	0.86
	Too acid	0.43	Slow water movement	0.61
11A, 11B:				
Dogue---------------	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Slow water movement	0.30	Too acid	0.42
	Too acid	0.11	Slow water movement	0.22
12A, 12B, 12C:				
Emporia-------------	Somewhat limited		Somewhat limited	
	Slow water movement	0.89	Too acid	0.91
	Too acid	0.32	Slow water movement	0.78
	Depth to saturated zone	0.09	Depth to saturated zone	0.09
Slagle--------------	Somewhat limited		Very limited	
	Slow water movement	0.89	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.73	Slow water movement	0.78

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
13A, 13B, 13C:				
Eulonia	Somewhat limited		Very limited	
	Depth to saturated zone	0.86	Too acid	1.00
	Too acid	0.68	Depth to saturated zone	0.86
	Slow water movement	0.30	Slow water movement	0.22
14B:				
Faceville	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.32	Too acid	0.91
	Low adsorption	0.19		
14C:				
Faceville	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.32	Too acid	0.91
	Low adsorption	0.19	Slope	0.01
15B:				
Georgeville	Somewhat limited		Very limited	
	Low adsorption	0.83	Too acid	1.00
	Too acid	0.68	Low adsorption	0.78
15C:				
Georgeville	Somewhat limited		Very limited	
	Low adsorption	0.83	Too acid	1.00
	Too acid	0.68	Low adsorption	0.78
	Slope	0.37	Slope	0.37
15D:				
Georgeville	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Low adsorption	0.83	Too acid	1.00
	Too acid	0.68	Low adsorption	0.78
16B:				
Helena	Very limited		Very limited	
	Slow water movement	1.00	Slow water movement	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too acid	0.32	Too acid	0.91
16C:				
Helena	Very limited		Very limited	
	Slow water movement	1.00	Slow water movement	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Slope	0.37	Too acid	0.91

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
17A:				
Myatt	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Too acid	1.00
	Runoff	0.40		
18B:				
Nansemond	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too acid	0.11	Too acid	0.42
19A:				
Nawney	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
Mattan	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
20D:				
Nevarc	Very limited		Very limited	
	Slow water movement	1.00	Slow water movement	1.00
	Depth to saturated zone	0.99	Too acid	1.00
	Slope	0.84	Depth to saturated zone	0.99
Emporia	Somewhat limited		Somewhat limited	
	Slow water movement	0.89	Too acid	0.91
	Slope	0.84	Slope	0.84
	Too acid	0.32	Slow water movement	0.78
20F:				
Nevarc	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	1.00	Slow water movement	1.00
	Depth to saturated zone	0.99	Too acid	1.00
Emporia	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.89	Too acid	0.91
	Too acid	0.32	Slow water movement	0.78

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
21B:				
Ocilla--------------	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.99	Filtering capacity	0.99
	Too acid	0.68	Depth to saturated zone	0.99
22A:				
Roanoke-------------	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Slow water movement	1.00
23B:				
Rumford-------------	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.01	Too acid	0.03
Uchee---------------	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.68	Filtering capacity	0.99
	Leaching	0.45	Slow water movement	0.22
24A:				
Seabrook------------	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Droughty	0.99	Filtering capacity	0.99
	Depth to saturated zone	0.86	Droughty	0.99
25A, 25B:				
Slagle--------------	Somewhat limited		Very limited	
	Slow water movement	0.89	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.73	Slow water movement	0.78
26A:				
State---------------	Not limited		Somewhat limited	
			Flooding	0.40
27B:				
Tarboro-------------	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.92	Droughty	0.92
	Leaching	0.45	Too acid	0.91

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28A:				
Tomotley	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Leaching	0.70	Too acid	1.00
	Too acid	0.68	Flooding	0.40
29B:				
Uchee	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.68	Filtering capacity	0.99
	Leaching	0.45	Slow water movement	0.22
30C:				
Uchee	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.68	Filtering capacity	0.99
	Leaching	0.45	Slow water movement	0.22
Slagle	Somewhat limited		Very limited	
	Slow water movement	0.89	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.73	Slow water movement	0.78
31:				
Udorthents	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Too acid	0.91
	Too acid	0.32	Depth to saturated zone	0.86
32A:				
Warne	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Slow water movement	1.00
	Runoff	0.40	Too acid	0.42
33A:				
Yemassee	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
1A:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
			Depth to saturated zone	0.99
			Flooding	0.40
1B:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
	Too steep for surface application	0.08	Depth to saturated zone	0.99
			Flooding	0.40
2B:				
Appling	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Too steep for surface application	0.32	Too acid	1.00
	Low adsorption	0.31	Low adsorption	0.31
2C:				
Appling	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Too steep for sprinkler application	0.60	Too steep for surface application	0.94
3A:				
Augusta	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00
4A:				
Bibb	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
Chastain	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
5A:				
Bojac	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
			Flooding	0.40
	Too acid	0.03	Too acid	0.03
6A:				
Buncombe	Very limited		Very limited	
	Too acid	1.00	Flooding	1.00
	Filtering capacity	0.99	Seepage	1.00
			Too acid	1.00
	Droughty	0.91		0
7A:				
Chastain	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
			Depth to saturated zone	1.00
	Flooding	1.00		
	Slow water movement	1.00	Too acid	1.00
8A:				
Chewacla	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
			Depth to saturated zone	1.00
	Too acid	1.00		
	Flooding	0.60	Seepage	1.00
9A, 9B:				
Craven	Somewhat limited		Very limited	
	Depth to saturated zone	0.86	Seepage	1.00
			Depth to saturated zone	0.86
	Slow water movement	0.61		
			Too acid	0.42
	Too acid	0.42		
10C3:				
Craven	Very limited		Somewhat limited	
	Too steep for surface application	1.00	Too acid	0.99
			Depth to saturated zone	0.86
	Too acid	0.99	Seepage	0.38
	Depth to saturated zone	0.86		
11A, 11B:				
Dogue	Very limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
			Depth to saturated zone	0.99
	Too acid	0.42		
	Slow water movement	0.22	Too acid	0.42

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
12A, 12B:				
Emporia	Somewhat limited		Very limited	
	Too acid	0.91	Seepage	1.00
	Slow water movement	0.78	Too acid	0.91
	Depth to saturated zone	0.09	Depth to saturated zone	0.0
Slagle	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Depth to saturated zone	0.86	Too acid	1.00
	Slow water movement	0.78	Depth to saturated zone	0.86
12C:				
Emporia	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	0.91	Too acid	0.91
	Slow water movement	0.78	Too steep for surface application	0.22
Slagle	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
13A, 13B:				
Eulonia	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Depth to saturated zone	0.86	Too acid	1.00
	Slow water movement	0.22	Depth to saturated zone	0.86
13C:				
Eulonia	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
14B:				
Faceville	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too acid	0.91	Too acid	0.91
	Low adsorption	0.19	Low adsorption	0.19

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
14C:				
Faceville	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	0.91
	Too acid	0.91	Too steep for surface application	0.22
15B:				
Georgeville	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Low adsorption	0.83	Too acid	1.00
	Too steep for surface application	0.32	Low adsorption	0.83
15C:				
Georgeville	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Low adsorption	0.83	Too steep for surface application	0.94
15D:				
Georgeville	Very limited		Very limited	
	Too steep for surface application	1.00	Too steep for surface application	1.00
	Too steep for sprinkler application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
16B:				
Helena	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too acid	0.91	Too acid	0.91
16C:				
Helena	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Too steep for surface application	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too steep for surface application	0.94

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
17A:				
Myatt	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
			Too acid	1.00
18B:				
Nansemond	Very limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
	Too acid	0.42	Depth to saturated zone	0.99
19A:				
Nawney	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
Mattan	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
20D:				
Nevarc	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Slow water movement	1.00	Too steep for surface application	1.00
	Too acid	1.00	Too acid	1.00
Emporia	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	0.91	Too steep for surface application	1.00
	Too steep for sprinkler application	0.90	Too acid	0.91
20F:				
Nevarc	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too steep for sprinkler application	1.00	Too steep for surface application	1.00
	Slow water movement	1.00	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
Emporia	Very limited		Very limited	
	Too steep for surface application	1.00	Too steep for surface application	1.00
	Too steep for sprinkler application	1.00	Seepage	1.00
	Too acid	0.91	Too acid	0.91
21B:				
Ocilla	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
22A:				
Roanoke	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
23B:				
Rumford	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too steep for surface application	0.08	Too acid	0.03
	Too acid	0.03		
Uchee	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Slow water movement	0.22		
24A:				
Seabrook	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Droughty	0.99	Depth to saturated zone	0.86
25A, 25B:				
Slagle	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Depth to saturated zone	0.86	Too acid	1.00
	Slow water movement	0.78	Depth to saturated zone	0.86

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
26A:				
State	Not limited		Very limited	
			Seepage	1.00
			Flooding	0.40
27B:				
Tarboro	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Droughty	0.92	Too acid	0.91
	Too acid	0.91	Flooding	0.40
28A:				
Tomotley	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00
29B:				
Uchee	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Slow water movement	0.22		
30C:				
Uchee	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Too steep for surface application	1.00	Too acid	1.00
	Filtering capacity	0.99	Too steep for surface application	0.22
Slagle	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
31:				
Udorthents	Somewhat limited		Very limited	
	Too acid	0.91	Seepage	1.00
	Depth to saturated zone	0.86	Too acid	0.91
	Too steep for surface application	0.32	Depth to saturated zone	0.86

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
32A:				
Warne	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
	Too acid	0.42	Too acid	0.42
33A:				
Yemassee	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
1A:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Slow water movement	1.00		
	Too acid	0.07		
1B:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Slow water movement	1.00	Too steep for surface application	0.08
	Too acid	0.07		
2B:				
Appling	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Slope	0.12	Too steep for surface application	0.32
			Low adsorption	0.31
2C:				
Appling	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	1.00
			Too steep for sprinkler irrigation	0.94
3A:				
Augusta	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.07		
4A:				
Bibb	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Slow water movement	1.00	Too acid	1.00

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
Chastain------------	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Too acid	1.00
5A:				
Bojac---------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	0.99
	Slow water movement	0.32	Too acid	0.03
6A:				
Buncombe------------	Somewhat limited		Very limited	
	Flooding	0.60	Too acid	1.00
	Too acid	0.07	Filtering capacity	0.99
			Flooding	0.60
7A:				
Chastain------------	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Too acid	1.00
8A:				
Chewacla------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Flooding	0.60	Flooding	0.60
9A, 9B:				
Craven--------------	Very limited		Somewhat limited	
	Slow water movement	1.00	Depth to saturated zone	0.86
	Depth to saturated zone	1.00	Slow water movement	0.43
	Too acid	0.77	Too acid	0.42
10C3:				
Craven--------------	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Depth to saturated zone	1.00	Too acid	0.99
	Slope	1.00	Depth to saturated zone	0.86

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
11A, 11B:				
Dogue	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	1.00	Too acid	0.42
	Too acid	0.07	Slow water movement	0.15
12A, 12B:				
Emporia	Very limited		Somewhat limited	
	Slow water movement	1.00	Too acid	0.91
	Depth to saturated zone	0.09	Slow water movement	0.60
			Depth to saturated zone	0.09
Slagle	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.14	Slow water movement	0.60
12C:				
Emporia	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	0.91
	Depth to saturated zone	0.09	Slow water movement	0.60
Slagle	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
13A, 13B:				
Eulonia	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Too acid	0.07	Slow water movement	0.15
13C:				
Eulonia	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Depth to saturated zone	1.00	Too acid	1.00
	Slope	1.00	Depth to saturated zone	0.86

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
14B:				
Faceville	Very limited		Very limited	
	Slow water movement	1.00	Filtering capacity	0.99
			Too acid	0.91
			Low adsorption	0.19
14C:				
Faceville	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00		
			Filtering capacity	0.99
			Too acid	0.91
15B:				
Georgeville	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
			Low adsorption	0.83
	Slope	0.12	Too steep for surface application	0.32
15C:				
Georgeville	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00		
			Too acid	1.00
			Too steep for sprinkler irrigation	0.94
15D:				
Georgeville	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Slow water movement	1.00		
			Too steep for sprinkler irrigation	1.00
			Too acid	1.00
16B:				
Helena	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Slow water movement	0.94
	Slope	0.12	Too acid	0.91

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
16C:				
Helena--------------	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00		
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
			Too steep for sprinkler irrigation	0.94
17A:				
Myatt---------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.55		
18B:				
Nansemond-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Too acid	0.77	Too acid	0.42
	Slow water movement	0.32		
19A:				
Nawney--------------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
Mattan--------------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
20D, 20F:				
Nevarc--------------	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Slow water movement	1.00		
	Depth to saturated zone	0.99	Too steep for sprinkler irrigation	1.00
			Too acid	1.00
Emporia-------------	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Slow water movement	1.00		
	Depth to saturated zone	0.09	Too steep for sprinkler irrigation	1.00
			Too acid	0.91

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:				
Ocilla	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.07	Depth to saturated zone	0.99
22A:				
Roanoke	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Too acid	1.00
23B:				
Rumford	Somewhat limited		Very limited	
	Slow water movement	0.32	Filtering capacity	0.99
			Too steep for surface application	0.08
			Too acid	0.03
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
			Filtering capacity	0.99
			Slow water movement	0.15
24A:				
Seabrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
			Filtering capacity	0.99
			Depth to saturated zone	0.86
25A, 25B:				
Slagle	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.14	Slow water movement	0.60
26A:				
State	Very limited		Not limited	
	Depth to saturated zone	1.00		
	Slow water movement	1.00		

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
27B:				
Tarboro	Not limited		Very limited	
			Filtering capacity	1.00
			Too acid	0.91
28A:				
Tomotley	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.07		
29B:				
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
			Filtering capacity	0.99
			Slow water movement	0.15
30C:				
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Slope	1.00	Too steep for surface application	1.00
			Filtering capacity	0.99
Slagle	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00		
	Depth to saturated zone	0.86	Too acid	1.00
			Depth to saturated zone	0.86
31:				
Udorthents	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Too acid	0.91
	Slow water movement	1.00	Depth to saturated zone	0.86
	Slope	0.12	Too steep for surface application	0.32
32A:				
Warne	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Slow water movement	0.94
	Too acid	0.07	Too acid	0.42

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
33A:				
Yemassee------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.07		

Forestland Productivity

(Absence of an entry indicates that information was not available)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
1A, 1B:				
Altavista	loblolly pine	91	129	loblolly pine
	longleaf pine	87	114	
	white oak	77	57	
2B, 2C:				
Appling	loblolly pine	84	114	loblolly pine, shortleaf pine
	scarlet oak	74	57	
	shortleaf pine	65	100	
	Virginia pine	74	114	
	white oak	64	43	
	yellow-poplar	88	86	
3A:				
Augusta	American sycamore	90	100	American sycamore, cherrybark oak, loblolly pine, slash pine, sweetgum, yellow-poplar
	loblolly pine	90	129	
	southern red oak	80	57	
	sweetgum	90	100	
	white oak	80	57	
4A:				
Bibb	sweetgum	90	100	eastern cottonwood, loblolly pine, longleaf pine, sweetgum, yellow-poplar
	water oak	90	86	
	loblolly pine	100	157	
Chastain	sweetgum	95	114	baldcypress, sweetgum
5A:				
Bojac	loblolly pine	80	114	loblolly pine, longleaf pine
	southern red oak	70	57	
	sweetgum	80	86	
6A:				
Buncombe	loblolly pine	90	129	American sycamore, eastern white pine, loblolly pine, yellow-poplar
	yellow-poplar	100	114	
7A:				
Chastain	sweetgum	95	114	baldcypress, sweetgum
8A:				
Chewacla	loblolly pine	95	143	American sycamore, loblolly pine, sweetgum, yellow-poplar
	sweetgum	97	129	
	water oak	80	72	
	yellow-poplar	95	100	
9A, 9B:				
Craven	southern red oak	90	72	loblolly pine, longleaf pine
	white oak	90	72	
	willow oak	85	86	
	loblolly pine	88	129	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
10C3:				
Craven	sweetgum	---	---	loblolly pine, longleaf pine
	white oak	---	---	
	loblolly pine	80	114	
11A, 11B:				
Dogue	southern red oak	80	57	loblolly pine, longleaf pine
	sweetgum	90	100	
	white oak	80	57	
	yellow-poplar	93	100	
	loblolly pine	90	129	
12A, 12B, 12C:				
Emporia	southern red oak	70	57	loblolly pine, longleaf pine, sweetgum
	loblolly pine	75	100	
Slagle	southern red oak	76	57	loblolly pine, longleaf pine, sweetgum, yellow-poplar
	sweetgum	86	100	
	water oak	76	72	
	yellow-poplar	90	86	
	loblolly pine	86	129	
13A, 13B, 13C:				
Eulonia	loblolly pine	90	129	American sycamore, loblolly pine, sweetgum, yellow-poplar
	longleaf pine	85	114	
	sweetgum	90	100	
	water oak	90	86	
14B, 14C:				
Faceville	loblolly pine	82	114	loblolly pine
	longleaf pine	65	72	
15B, 15C, 15D:				
Georgeville	loblolly pine	81	114	black walnut, eastern redcedar, loblolly pine, Virginia pine, yellow-poplar
	longleaf pine	67	72	
	scarlet oak	70	57	
	shortleaf pine	63	100	
	southern red oak	67	43	
	white oak	69	57	
16B, 16C:				
Helena	loblolly pine	84	114	loblolly pine, yellow-poplar
	shortleaf pine	66	100	
17A:				
Myatt	loblolly pine	88	129	loblolly pine, slash pine, sweetgum
	slash pine	92	172	
	sweetgum	92	114	
	water oak	86	86	
18B:				
Nansemond	loblolly pine	86	129	black walnut, loblolly pine, sweetgum, yellow-poplar
	shortleaf pine	77	129	
	sweetgum	90	100	
	white oak	---	---	
	yellow-poplar	90	86	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
19A:				
Nawney------------------	baldcypress---------	---	---	---
	green ash-----------	---	---	
	red maple-----------	---	---	
	water tupelo--------	---	---	
	sweetgum------------	80	---	
Mattan------------------	baldcypress---------	80	---	---
	green ash-----------	---	---	
	red maple-----------	---	---	
	sweetgum------------	---	---	
	water tupelo--------	---	---	
20D, 20F:				
Nevarc------------------	southern red oak----	70	57	loblolly pine, longleaf pine
	sweetgum------------	76	72	
	white oak-----------	70	57	
	yellow-poplar-------	80	72	
	loblolly pine-------	77	100	
Emporia-----------------	southern red oak----	74	57	loblolly pine, longleaf pine
	sweetgum------------	80	86	
	Virginia pine-------	74	114	
	yellow-poplar-------	82	72	
	loblolly pine-------	82	114	
21B:				
Ocilla------------------	loblolly pine-------	79	114	loblolly pine, slash pine
	longleaf pine-------	68	72	
	slash pine----------	80	143	
22A:				
Roanoke-----------------	loblolly pine-------	99	95	sweetgum
23B:				
Rumford-----------------	southern red oak----	65	43	loblolly pine, longleaf pine
	Virginia pine-------	70	114	
	loblolly pine-------	80	114	
Uchee-------------------	longleaf pine-------	67	72	loblolly pine, longleaf pine, slash pine
	loblolly pine-------	80	114	
24A:				
Seabrook----------------	loblolly pine-------	81	114	loblolly pine, longleaf pine
25A, 25B:				
Slagle------------------	southern red oak----	76	57	loblolly pine, longleaf pine, sweetgum, yellow-poplar
	sweetgum------------	86	100	
	water oak-----------	76	72	
	yellow-poplar-------	90	86	
	loblolly pine-------	86	129	
26A:				
State-------------------	loblolly pine-------	86	129	loblolly pine, yellow-poplar
	southern red oak----	85	72	
	yellow-poplar-------	100	114	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
27B:				
Tarboro	loblolly pine	72	100	loblolly pine, longleaf pine
28A:				
Tomotley	loblolly pine	99	143	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	willow oak	86	86	
29B:				
Uchee	longleaf pine	67	72	loblolly pine, longleaf pine, slash pine
	loblolly pine	80	114	
30C:				
Uchee	longleaf pine	67	72	loblolly pine, longleaf pine, slash pine
	loblolly pine	80	114	
Slagle	southern red oak	76	57	loblolly pine, longleaf pine, sweetgum, yellow-poplar
	sweetgum	86	100	
	water oak	76	72	
	yellow-poplar	90	86	
	loblolly pine	86	129	
31:				
Udorthents	---	---	---	---
32A:				
Warne	loblolly pine	86	129	American sycamore, loblolly pine, sweetgum, water oak
	sweetgum	90	100	
33A:				
Yemassee	loblolly pine	90	129	American sycamore, loblolly pine, slash pine, yellow-poplar
	longleaf pine	80	100	
	slash pine	88	157	
	sweetgum	95	114	
	yellow-poplar	100	114	

Haul Roads, Log Landings, and Soil Rutting on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Slight		Well suited		Moderate	
					Low strength	0.50
2B:						
Appling	Slight		Well suited		Moderate	
					Low strength	0.50
2C:						
Appling	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
3A:						
Augusta	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
4A:						
Bibb	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
			Wetness	1.00		
Chastain	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		
5A:						
Bojac	Slight		Well suited		Moderate	
					Low strength	0.50
6A:						
Buncombe	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
7A:						
Chastain	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		
8A:						
Chewacla	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	0.50		
			Low strength	0.50		
9A, 9B:						
Craven	Moderate		Well suited		Moderate	
	Low strength	0.50			Low strength	0.50
10C3:						
Craven	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
11A, 11B:						
Dogue----------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
12A, 12B:						
Emporia--------------	Slight		Well suited		Moderate	
					Low strength	0.50
Slagle---------------	Slight		Well suited		Moderate	
					Low strength	0.50
12C:						
Emporia--------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
Slagle---------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
13A, 13B:						
Eulonia--------------	Slight		Well suited		Moderate	
					Low strength	0.50
13C:						
Eulonia--------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
14B:						
Faceville------------	Slight		Well suited		Moderate	
					Low strength	0.50
14C:						
Faceville------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
15B:						
Georgeville----------	Slight		Moderately suited		Severe	
			Low strength	0.50	Low strength	1.00
15C:						
Georgeville----------	Slight		Moderately suited		Severe	
			Slope	0.50	Low strength	1.00
			Low strength	0.50		
15D:						
Georgeville----------	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
16B:						
Helena---------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
16C:						
Helena---------------	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17A:						
Myatt	Moderate		Poorly suited		Severe	
	Low strength	0.50	Wetness	1.00	Low strength	1.00
			Low strength	0.50		
18B:						
Nansemond	Slight		Well suited		Moderate	
					Low strength	0.50
19A:						
Nawney	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Wetness	1.00	Flooding	1.00	Wetness	0.50
	Low strength	0.50	Wetness	1.00		
Mattan	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Wetness	1.00	Flooding	1.00	Wetness	0.50
			Low strength	1.00		
20D:						
Nevarc	Moderate		Poorly suited		Severe	
	Low strength	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Emporia	Slight		Poorly suited		Moderate	
			Slope	1.00	Low strength	0.50
20F:						
Nevarc	Moderate		Poorly suited		Severe	
	Slope	0.50	Slope	1.00	Low strength	1.00
			Low strength	0.50		
Emporia	Moderate		Poorly suited		Moderate	
	Slope	0.50	Slope	1.00	Low strength	0.50
21B:						
Ocilla	Slight		Well suited		Moderate	
					Low strength	0.50
22A:						
Roanoke	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Wetness	1.00		
			Low strength	0.50		
23B:						
Rumford	Slight		Well suited		Moderate	
					Low strength	0.50
Uchee	Slight		Well suited		Moderate	
					Low strength	0.50
24A:						
Seabrook	Slight		Well suited		Moderate	
					Low strength	0.50

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25A, 25B:						
Slagle	Slight		Well suited		Moderate	
					Low strength	0.50
26A:						
State	Slight		Well suited		Moderate	
					Low strength	0.50
27B:						
Tarboro	Slight		Well suited		Moderate	
					Low strength	0.50
28A:						
Tomotley	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
			Wetness	0.50		
29B:						
Uchee	Slight		Well suited		Moderate	
					Low strength	0.50
30C:						
Uchee	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
Slagle	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
31:						
Udorthents	Slight		Well suited		Moderate	
					Low strength	0.50
32A:						
Warne	Moderate		Moderately suited		Severe	
	Low strength	0.50	Wetness	0.50	Low strength	1.00
			Low strength	0.50		
33A:						
Yemassee	Slight		Well suited		Moderate	
					Low strength	0.50

Hazard of Erosion and Suitability for Roads on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
1A:						
Altavista	Slight		Slight		Well suited	
1B:						
Altavista	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
2B:						
Appling	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
2C:						
Appling	Slight		Severe		Moderately suited	
			Slope/erodibility	0.95	Slope	0.50
3A:						
Augusta	Slight		Slight		Moderately suited	
					Wetness	0.50
4A:						
Bibb	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
Chastain	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
5A:						
Bojac	Slight		Slight		Well suited	
6A:						
Buncombe	Slight		Slight		Poorly suited	
					Flooding	1.00
7A:						
Chastain	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50
8A:						
Chewacla	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	0.50
					Low strength	0.50
9A:						
Craven	Slight		Slight		Well suited	
9B:						
Craven	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
10C3:						
Craven	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Low strength	0.50
11A:						
Dogue	Slight		Slight		Moderately suited	
					Low strength	0.50
11B:						
Dogue	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
12A:						
Emporia	Slight		Slight		Well suited	
Slagle	Slight		Slight		Well suited	
12B:						
Emporia	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
Slagle	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
12C:						
Emporia	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
Slagle	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
13A:						
Eulonia	Slight		Slight		Well suited	
13B:						
Eulonia	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
13C:						
Eulonia	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
14B:						
Faceville	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
14C:						
Faceville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
15B:						
Georgeville	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
15C:						
Georgeville	Moderate		Severe		Moderately suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
					Low strength	0.50

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
15D:						
Georgeville----------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
16B:						
Helena--------------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
16C:						
Helena--------------	Slight		Severe		Moderately suited	
			Slope/erodibility	0.95	Slope	0.50
					Low strength	0.50
17A:						
Myatt---------------	Slight		Slight		Poorly suited	
					Wetness	1.00
					Low strength	0.50
18B:						
Nansemond-----------	Slight		Slight		Well suited	
19A:						
Nawney--------------	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
Mattan--------------	Very Severe		Very Severe		Poorly suited	
	Organic matter content high	1.00	Organic matter content high	1.00	Ponding	1.00
					Flooding	1.00
					Low strength	1.00
20D:						
Nevarc--------------	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Emporia-------------	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00
20F:						
Nevarc--------------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
					Low strength	0.50
Emporia-------------	Moderate		Severe		Poorly suited	
	Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
21B:						
Ocilla--------------	Slight		Slight		Well suited	
22A:						
Roanoke-------------	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Low strength	0.50

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23B:						
Rumford	Slight		Slight		Well suited	
Uchee	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
24A:						
Seabrook	Slight		Slight		Well suited	
25A:						
Slagle	Slight		Slight		Well suited	
25B:						
Slagle	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
26A:						
State	Slight		Slight		Well suited	
27B:						
Tarboro	Slight		Slight		Well suited	
28A:						
Tomotley	Slight		Slight		Moderately suited	
					Sandiness	0.50
					Wetness	0.50
29B:						
Uchee	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
30C:						
Uchee	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
Slagle	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
31:						
Udorthents	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
32A:						
Warne	Slight		Slight		Moderately suited	
					Wetness	0.50
					Low strength	0.50
33A:						
Yemassee	Slight		Slight		Well suited	

Forestland Planting and Harvesting

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Well suited		Well suited		Well suited	
2B, 2C:						
Appling	Well suited		Moderately suited		Well suited	
			Slope	0.50		
3A:						
Augusta	Well suited		Well suited		Well suited	
4A:						
Bibb	Well suited		Well suited		Well suited	
Chastain	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
5A:						
Bojac	Well suited		Well suited		Well suited	
6A:						
Buncombe	Well suited		Well suited		Well suited	
7A:						
Chastain	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
8A:						
Chewacla	Well suited		Well suited		Moderately suited	
					Low strength	0.50
9A, 9B:						
Craven	Poorly suited		Poorly suited		Well suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
10C3:						
Craven	Poorly suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
			Slope	0.50		
11A, 11B:						
Dogue	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
12A, 12B:						
Emporia	Well suited		Well suited		Well suited	
Slagle	Well suited		Well suited		Well suited	

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12C:						
Emporia	Well suited		Moderately suited		Well suited	
			Slope	0.50		
Slagle	Well suited		Moderately suited		Well suited	
			Slope	0.50		
13A, 13B:						
Eulonia	Poorly suited		Poorly suited		Well suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
13C:						
Eulonia	Poorly suited		Poorly suited		Well suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75		
			Slope	0.50		
14B:						
Faceville	Well suited		Well suited		Well suited	
14C:						
Faceville	Well suited		Moderately suited		Well suited	
			Slope	0.50		
15B, 15C:						
Georgeville	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
			Stickiness; high plasticity index	0.50		
15D:						
Georgeville	Moderately suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
			Stickiness; high plasticity index	0.50	Slope	0.50
16B, 16C:						
Helena	Well suited		Moderately suited		Moderately suited	
			Slope	0.50	Low strength	0.50
17A:						
Myatt	Well suited		Well suited		Moderately suited	
					Low strength	0.50
18B:						
Nansemond	Well suited		Well suited		Well suited	
19A:						
Nawney	Moderately suited		Moderately suited		Poorly suited	
	Wetness	0.50	Wetness	0.50	Wetness	1.00
					Low strength	0.50
Mattan	Poorly suited		Poorly suited		Poorly suited	
	Wetness	0.75	Wetness	0.75	Low strength	1.00
					Wetness	1.00

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20D:						
Nevarc	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
			Slope	0.50		
Emporia	Well suited		Moderately suited		Well suited	
			Slope	0.50		
20F:						
Nevarc	Moderately suited		Unsuited		Moderately suited	
	Stickiness; high plasticity index	0.50	Slope	1.00	Slope	0.50
			Stickiness; high plasticity index	0.50	Low strength	0.50
Emporia	Well suited		Unsuited		Moderately suited	
			Slope	1.00	Slope	0.50
21B:						
Ocilla	Well suited		Well suited		Well suited	
22A:						
Roanoke	Poorly suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
23B:						
Rumford	Well suited		Well suited		Well suited	
Uchee	Well suited		Well suited		Well suited	
24A:						
Seabrook	Well suited		Well suited		Well suited	
25A, 25B:						
Slagle	Well suited		Well suited		Well suited	
26A:						
State	Well suited		Well suited		Well suited	
27B:						
Tarboro	Well suited		Well suited		Well suited	
28A:						
Tomotley	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
29B:						
Uchee	Well suited		Well suited		Well suited	
30C:						
Uchee	Well suited		Moderately suited		Well suited	
			Slope	0.50		
Slagle	Well suited		Moderately suited		Well suited	
			Slope	0.50		

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:						
Udorthents	Well suited		Moderately suited		Well suited	
			Slope	0.50		
32A:						
Warne	Poorly suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
33A:						
Yemassee	Well suited		Well suited		Well suited	

Forestland Site Preparation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:				
Altavista	Well suited		Well suited	
2B, 2C:				
Appling	Well suited		Well suited	
3A:				
Augusta	Well suited		Well suited	
4A:				
Bibb	Well suited		Well suited	
Chastain	Well suited		Well suited	
5A:				
Bojac	Well suited		Well suited	
6A:				
Buncombe	Well suited		Well suited	
7A:				
Chastain	Well suited		Well suited	
8A:				
Chewacla	Well suited		Well suited	
9A, 9B:				
Craven	Poorly suited		Well suited	
	Stickiness; high plasticity index	0.50		
10C3:				
Craven	Poorly suited		Well suited	
	Stickiness; high plasticity index	0.50		
11A, 11B:				
Dogue	Well suited		Well suited	
12A, 12B, 12C:				
Emporia	Well suited		Well suited	
Slagle	Well suited		Well suited	
13A, 13B, 13C:				
Eulonia	Poorly suited		Well suited	
	Stickiness; high plasticity index	0.50		
14B, 14C:				
Faceville	Well suited		Well suited	

Forestland Site Preparation—Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
15B, 15C:				
Georgeville	Well suited		Well suited	
15D:				
Georgeville	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
16B, 16C:				
Helena	Well suited		Well suited	
17A:				
Myatt	Well suited		Well suited	
18B:				
Nansemond	Well suited		Well suited	
19A:				
Nawney	Poorly suited Wetness	 0.50	Unsuited Wetness	 1.00
Mattan	Unsuited Wetness	 0.75	Unsuited Wetness	 1.00
20D:				
Nevarc	Well suited		Well suited	
Emporia	Well suited		Well suited	
20F:				
Nevarc	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
Emporia	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50
21B:				
Ocilla	Well suited		Well suited	
22A:				
Roanoke	Poorly suited Stickiness; high plasticity index	 0.50	Well suited	
23B:				
Rumford	Well suited		Well suited	
Uchee	Well suited		Well suited	
24A:				
Seabrook	Well suited		Well suited	
25A, 25B:				
Slagle	Well suited		Well suited	
26A:				
State	Well suited		Well suited	
27B:				
Tarboro	Well suited		Well suited	

Forestland Site Preparation—Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28A:				
Tomotley	Well suited		Well suited	
29B:				
Uchee	Well suited		Well suited	
30C:				
Uchee	Well suited		Well suited	
Slagle	Well suited		Well suited	
31:				
Udorthents	Well suited		Well suited	
32A:				
Warne	Poorly suited		Well suited	
	Stickiness; high plasticity index	0.50		
33A:				
Yemassee	Well suited		Well suited	

Damage by Fire and Seedling Mortality on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential for damage to soil by fire		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:				
Altavista	Moderate		Low	
	Texture/rock fragments	0.50		
2B, 2C:				
Appling	High		Low	
	Texture/rock fragments	1.00		
3A:				
Augusta	Moderate		Low	
	Texture/rock fragments	0.50		
4A:				
Bibb	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Chastain	Low		High	
	Texture/surface depth/rock fragments	0.10	Wetness	1.00
5A:				
Bojac	Moderate		Low	
	Texture/rock fragments	0.50		
6A:				
Buncombe	High		Low	
	Texture/rock fragments	1.00		
7A:				
Chastain	Low		High	
	Texture/surface depth/rock fragments	0.10	Wetness	1.00
8A:				
Chewacla	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
9A, 9B:				
Craven	Moderate		Low	
	Texture/rock fragments	0.50		
10C3:				
Craven	Low		Low	

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
11A, 11B:				
Dogue	Moderate		Low	
	Texture/rock fragments	0.50		
12A, 12B, 12C:				
Emporia	Moderate		Low	
	Texture/rock fragments	0.50		
Slagle	Moderate		Low	
	Texture/rock fragments	0.50		
13A, 13B, 13C:				
Eulonia	Moderate		Low	
	Texture/rock fragments	0.50		
14B, 14C:				
Faceville	Moderate		Low	
	Texture/rock fragments	0.50		
15B, 15C:				
Georgeville	High		Low	
	Texture/surface depth/rock fragments	1.00		
15D:				
Georgeville	High		Moderate	
	Texture/surface depth/rock fragments	1.00	Available water	0.50
16B, 16C:				
Helena	Moderate		Low	
	Texture/rock fragments	0.50		
17A:				
Myatt	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
18B:				
Nansemond	Moderate		Low	
	Texture/rock fragments	0.50		
19A:				
Nawney	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Mattan	Low		High	
			Wetness	1.00
			Soil reaction	0.50

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
20D:				
Nevarc	Moderate		Low	
	Texture/surface depth/rock fragments	0.50		
Emporia	Moderate		Low	
	Texture/rock fragments	0.50		
20F:				
Nevarc	High		Low	
	Texture/slope/surface depth/rock fragments	1.00		
Emporia	Moderate		Low	
	Texture/slope/rock fragments	0.50		
21B:				
Ocilla	High		Low	
	Texture/rock fragments	1.00		
22A:				
Roanoke	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
23B:				
Rumford	High		Low	
	Texture/rock fragments	1.00		
Uchee	High		Low	
	Texture/rock fragments	1.00		
24A:				
Seabrook	High		Low	
	Texture/rock fragments	1.00		
25A, 25B:				
Slagle	Moderate		Low	
	Texture/rock fragments	0.50		
26A:				
State	Moderate		Low	
	Texture/rock fragments	0.50		
27B:				
Tarboro	High		Low	
	Texture/rock fragments	1.00		

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
28A:				
Tomotley	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
29B:				
Uchee	High		Low	
	Texture/rock fragments	1.00		
30C:				
Uchee	High		Low	
	Texture/rock fragments	1.00		
Slagle	Moderate		Low	
	Texture/rock fragments	0.50		
31:				
Udorthents	Moderate		Low	
	Texture/rock fragments	0.50		
32A:				
Warne	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
33A:				
Yemassee	Low		Moderate	
	Texture/rock fragments	0.10	Wetness	0.50

Camp Areas, Picnic Areas, and Playgrounds

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A:						
Altavista	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.19	Depth to saturated zone	
	Depth to saturated zone	0.39				
1B:						
Altavista	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.19	Slope	0.50
	Depth to saturated zone	0.39			Depth to saturated zone	0.39
2B:						
Appling	Not limited		Not limited		Somewhat limited	
					Slope	0.88
2C:						
Appling	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
3A:						
Augusta	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Depth to saturated zone	0.98				
4A:						
Bibb	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.94	Flooding	1.00
	Slow water movement	0.94	Flooding	0.40	Slow water movement	0.94
5A:						
Bojac	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Too sandy	0.89	Too sandy	0.89
	Too sandy	0.89				
6A:						
Buncombe	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Too sandy	0.79	Too sandy	0.79
	Too sandy	0.79			Flooding	0.60

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7A:						
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.94	Flooding	1.00
	Slow water movement	0.94	Flooding	0.40	Slow water movement	0.94
8A:						
Chewacla	Very limited		Somewhat limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
	Flooding	1.00			Flooding	0.60
9A:						
Craven	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.44	Slow water movement	0.44	Slow water movement	0.44
9B:						
Craven	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.44	Slow water movement	0.44	Slope	0.50
					Slow water movement	0.44
10C3:						
Craven	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.44	Slow water movement	0.44	Slope	1.00
	Slope	0.01	Slope	0.01	Slow water movement	0.44
11A:						
Dogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
11B:						
Dogue	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
	Slow water movement	0.15	Slow water movement	0.15	Depth to saturated zone	0.39
					Slow water movement	0.15
12A:						
Emporia	Not limited		Not limited		Not limited	
Slagle	Not limited		Not limited		Not limited	
12B:						
Emporia	Not limited		Not limited		Somewhat limited	
					Slope	0.50
Slagle	Not limited		Not limited		Somewhat limited	
					Slope	0.50

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
12C:						
Emporia	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
Slagle	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
13A:						
Eulonia	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
13B:						
Eulonia	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.15	Slow water movement	0.15	Slope	0.50
					Slow water movement	0.15
13C:						
Eulonia	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.15	Slow water movement	0.15	Slope	1.00
	Slope	0.01	Slope	0.01	Slow water movement	0.15
14B:						
Faceville	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.01	Too sandy	0.01	Slope	0.50
					Too sandy	0.01
14C:						
Faceville	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.01	Too sandy	0.01	Slope	1.00
	Slope	0.01	Slope	0.01	Too sandy	0.01
15B:						
Georgeville	Not limited		Not limited		Somewhat limited	
					Slope	0.88
15C:						
Georgeville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
15D:						
Georgeville	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
16B:						
Helena	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.88
					Depth to saturated zone	0.39

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
16C:						
Helena	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Depth to saturated zone	0.39	Slope	0.37	Slow water movement	0.94
	Slope	0.37	Depth to saturated zone	0.19	Depth to saturated zone	0.39
17A:						
Myatt	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
18B:						
Nansemond	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
19A:						
Nawney	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Mattan	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
	Ponding	1.00	Organic matter content	1.00	Flooding	1.00
20D:						
Nevarc	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Slope	0.84	Slope	0.84	Slow water movement	0.94
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Emporia	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.84	Slope	0.84	Slope	1.00
20F:						
Nevarc	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Emporia	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
21B:						
Ocilla	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.72	Too sandy	0.72	Too sandy	0.72
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
					Slope	0.12

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
22A:						
Roanoke	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.94	Flooding	1.00
	Slow water movement	0.94	Flooding	0.40	Slow water movement	0.94
23B:						
Rumford	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.50
Uchee	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
	Slow water movement	0.15	Slow water movement	0.15	Slope	0.50
					Slow water movement	0.15
24A:						
Seabrook	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
25A:						
Slagle	Not limited		Not limited		Not limited	
25B:						
Slagle	Not limited		Not limited		Somewhat limited	
					Slope	0.50
26A:						
State	Very limited		Not limited		Not limited	
	Flooding	1.00				
27B:						
Tarboro	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Too sandy	0.79	Too sandy	0.79
	Too sandy	0.79			Slope	0.12
28A:						
Tomotley	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00				
29B:						
Uchee	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
					Slope	0.12
30C:						
Uchee	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.95	Too sandy	0.95	Slope	1.00
	Slow water movement	0.15	Slow water movement	0.15	Too sandy	0.95
	Slope	0.01	Slope	0.01	Slow water movement	0.15

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Slagle----------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
31:						
Udorthents------------	Not limited		Not limited		Somewhat limited	
					Slope	0.88
32A:						
Warne-----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.94	Slow water movement	0.94
	Slow water movement	0.94	Too sandy	0.01	Too sandy	0.01
33A:						
Yemassee--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Paths, Trails, and Golf Fairways

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
2B:						
Appling	Not limited		Not limited		Not limited	
2C:						
Appling	Not limited		Not limited		Somewhat limited	
					Slope	0.37
3A:						
Augusta	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
4A:						
Bibb	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
5A:						
Bojac	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.89	Too sandy	0.89		
6A:						
Buncombe	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.79	Too sandy	0.79	Droughty	0.98
					Flooding	0.60
7A:						
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
8A:						
Chewacla	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
					Flooding	0.60
9A, 9B:						
Craven	Not limited		Not limited		Not limited	
10C3:						
Craven	Not limited		Not limited		Somewhat limited	
					Slope	0.01

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
11A, 11B:						
Dogue	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
12A, 12B:						
Emporia	Not limited		Not limited		Not limited	
Slagle	Not limited		Not limited		Not limited	
12C:						
Emporia	Not limited		Not limited		Somewhat limited	
					Slope	0.01
Slagle	Not limited		Not limited		Somewhat limited	
					Slope	0.01
13A, 13B:						
Eulonia	Not limited		Not limited		Not limited	
13C:						
Eulonia	Not limited		Not limited		Somewhat limited	
					Slope	0.01
14B:						
Faceville	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.01	Too sandy	0.01		
14C:						
Faceville	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.01	Too sandy	0.01	Slope	0.01
15B:						
Georgeville	Not limited		Not limited		Not limited	
15C:						
Georgeville	Very limited		Very limited		Somewhat limited	
	Water erosion	1.00	Water erosion	1.00	Slope	0.37
15D:						
Georgeville	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	0.50				
16B:						
Helena	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
16C:						
Helena	Not limited		Not limited		Somewhat limited	
					Slope	0.37
					Depth to saturated zone	0.19
17A:						
Myatt	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
18B:						
Nansemond-----------	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.19
19A:						
Nawney--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Mattan--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Organic matter content	1.00	Organic matter content	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00	Organic matter content	1.00
20D:						
Nevarc--------------	Not limited		Not limited		Somewhat limited	
					Slope	0.84
					Depth to saturated zone	0.19
Emporia-------------	Not limited		Not limited		Somewhat limited	
					Slope	0.84
20F:						
Nevarc--------------	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.22	Slope	1.00
					Depth to saturated zone	0.19
Emporia-------------	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.22	Slope	1.00
21B:						
Ocilla--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.72	Too sandy	0.72	Depth to saturated zone	0.19
22A:						
Roanoke-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
23B:						
Rumford-------------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.81	Too sandy	0.81		
Uchee---------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.15
24A:						
Seabrook------------	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.92
					Too sandy	0.50

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
25A, 25B:						
Slagle	Not limited		Not limited		Not limited	
26A:						
State	Not limited		Not limited		Not limited	
27B:						
Tarboro	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.79	Too sandy	0.79	Droughty	1.00
28A:						
Tomotley	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
29B:						
Uchee	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.15
30C:						
Uchee	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.95	Too sandy	0.95	Droughty	0.15
					Slope	0.01
Slagle	Not limited		Not limited		Somewhat limited	
					Slope	0.01
31:						
Udorthents	Not limited		Not limited		Not limited	
32A:						
Warne	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.01	Too sandy	0.01		
33A:						
Yemassee	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
2B:						
Appling	Not limited		Not limited		Somewhat limited	
					Slope	0.12
2C:						
Appling	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
3A:						
Augusta	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
4A:						
Bibb	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Chastain	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
5A:						
Bojac	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
6A:						
Buncombe	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
7A:						
Chastain	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
8A:						
Chewacla	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9A, 9B:						
Craven	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
10C3:						
Craven	Somewhat limited		Very limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Slope	1.00
	Slope	0.01	Shrink-swell	0.50	Shrink-swell	0.50
			Slope	0.01		
11A, 11B:						
Dogue	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
12A, 12B:						
Emporia	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.82		
Slagle	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
12C:						
Emporia	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Depth to saturated zone	0.82	Slope	1.00
			Slope	0.01		
Slagle	Somewhat limited		Very limited		Very limited	
	Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
			Slope	0.01		
13A, 13B:						
Eulonia	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
13C:						
Eulonia	Somewhat limited		Very limited		Very limited	
	Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
			Slope	0.01		
14B:						
Faceville	Not limited		Not limited		Not limited	
14C:						
Faceville	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Slope	0.01	Slope	1.00
15B:						
Georgeville	Not limited		Not limited		Somewhat limited	
					Slope	0.12

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
15C:						
Georgeville----------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
15D:						
Georgeville----------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
16B:						
Helena---------------	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
	Depth to saturated zone	0.39	Shrink-swell	1.00	Depth to saturated zone	0.39
					Slope	0.12
16C:						
Helena---------------	Very limited		Very limited		Very limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
	Depth to saturated zone	0.39	Shrink-swell	1.00	Slope	1.00
	Slope	0.37	Slope	0.37	Depth to saturated zone	0.39
17A:						
Myatt----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
18B:						
Nansemond------------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
19A:						
Nawney---------------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Mattan---------------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20D:						
Nevarc---------------	Somewhat limited		Very limited		Very limited	
	Slope	0.84	Depth to saturated zone	1.00	Slope	1.00
	Shrink-swell	0.50	Slope	0.84	Shrink-swell	0.50
	Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
Emporia--------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.84	Slope	0.84	Slope	1.00
			Depth to saturated zone	0.82		

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
20F:						
Nevarc	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
Emporia	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to saturated zone	0.82		
21B:						
Ocilla	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
22A:						
Roanoke	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
23B:						
Rumford	Not limited		Not limited		Not limited	
Uchee	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.61		
			Shrink-swell	0.50		
24A:						
Seabrook	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
25A, 25B:						
Slagle	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
26A:						
State	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
			Depth to saturated zone	0.15		
27B:						
Tarboro	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
28A:						
Tomotley	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29B:						
Uchee----------------	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.61		
			Shrink-swell	0.50		
30C:						
Uchee----------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.01	Depth to saturated zone	0.61	Slope	1.00
			Shrink-swell	0.50		
			Slope	0.01		
Slagle---------------	Somewhat limited		Very limited		Very limited	
	Slope	0.01	Depth to saturated zone	0.99	Slope	1.00
			Slope	0.01		
31:						
Udorthents-----------	Not limited		Very limited		Somewhat limited	
			Depth to saturated zone	0.99	Slope	0.12
32A:						
Warne----------------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
33A:						
Yemassee-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Flooding	0.40	Cutbanks cave	0.10		
	Depth to saturated zone	0.19				
2B:						
Appling	Somewhat limited		Somewhat limited		Not limited	
	Low strength	0.10	Too clayey	0.28		
			Cutbanks cave	0.10		
2C:						
Appling	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.37	Slope	0.37	Slope	0.37
	Low strength	0.10	Too clayey	0.28		
			Cutbanks cave	0.10		
3A:						
Augusta	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Flooding	0.40	Cutbanks cave	1.00		
4A:						
Bibb	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
			Flooding	0.80		
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Low strength	1.00	Cutbanks cave	0.10		
5A:						
Bojac	Somewhat limited		Very limited		Not limited	
	Flooding	0.40	Cutbanks cave	1.00		
			Depth to saturated zone	0.15		
6A:						
Buncombe	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Cutbanks cave	1.00	Droughty	0.98
			Flooding	0.60	Flooding	0.60
7A:						
Chastain	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Low strength	1.00	Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8A:						
Chewacla	Very limited		Very limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
	Low strength	1.00	Flooding	0.60	Flooding	0.60
	Depth to saturated zone	0.94	Cutbanks cave	0.10		
9A, 9B:						
Craven	Very limited		Very limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
	Shrink-swell	0.50	Too clayey	0.28		
			Cutbanks cave	0.10		
10C3:						
Craven	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
	Shrink-swell	0.50	Too clayey	0.28		
	Slope	0.01	Cutbanks cave	0.10		
11A, 11B:						
Dogue	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Shrink-swell	0.50	Too clayey	0.50		
	Depth to saturated zone	0.19	Cutbanks cave	0.10		
12A, 12B:						
Emporia	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.82		
			Cutbanks cave	0.10		
Slagle	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
			Cutbanks cave	0.10		
12C:						
Emporia	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.01	Depth to saturated zone	0.82	Slope	0.01
			Cutbanks cave	0.10		
			Slope	0.01		
Slagle	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.01	Depth to saturated zone	0.99	Slope	0.01
			Cutbanks cave	0.10		
			Slope	0.01		
13A, 13B:						
Eulonia	Very limited		Very limited		Not limited	
	Low strength	1.00	Depth to saturated zone	0.99		
			Too clayey	0.12		
			Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13C:						
Eulonia	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	0.99	Slope	0.01
	Slope	0.01	Too clayey	0.12		
			Cutbanks cave	0.10		
14B:						
Faceville	Not limited		Somewhat limited		Not limited	
			Cutbanks cave	0.10		
14C:						
Faceville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.01	Cutbanks cave	0.10	Slope	0.01
			Slope	0.01		
15B:						
Georgeville	Somewhat limited		Somewhat limited		Not limited	
	Low strength	0.10	Too clayey	0.50		
			Cutbanks cave	0.10		
15C:						
Georgeville	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.37	Too clayey	0.50	Slope	0.37
	Low strength	0.10	Slope	0.37		
			Cutbanks cave	0.10		
15D:						
Georgeville	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	0.10	Too clayey	0.50		
			Cutbanks cave	0.10		
16B:						
Helena	Very limited		Very limited		Somewhat limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Low strength	1.00	Too clayey	0.28		
	Depth to saturated zone	0.19	Cutbanks cave	0.10		
16C:						
Helena	Very limited		Very limited		Somewhat limited	
	Shrink-swell	1.00	Depth to saturated zone	1.00	Slope	0.37
					Depth to saturated zone	0.19
	Low strength	1.00	Slope	0.37		
	Slope	0.37	Too clayey	0.28		
17A:						
Myatt	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Cutbanks cave	0.10		
18B:						
Nansemond	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
			Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19A:						
Nawney	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
Mattan	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Organic matter content	1.00
20D:						
Nevarc	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	1.00	Slope	0.84
	Slope	0.84	Slope	0.84	Depth to saturated zone	0.19
	Shrink-swell	0.50	Cutbanks cave	0.10		
Emporia	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.84	Slope	0.84	Slope	0.84
			Depth to saturated zone	0.82		
			Cutbanks cave	0.10		
20F:						
Nevarc	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Shrink-swell	0.50	Cutbanks cave	0.10		
Emporia	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to saturated zone	0.82		
			Cutbanks cave	0.10		
21B:						
Ocilla	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
			Cutbanks cave	1.00		
22A:						
Roanoke	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
	Low strength	1.00	Too clayey	0.12		
23B:						
Rumford	Not limited		Very limited		Not limited	
			Cutbanks cave	1.00		
Uchee	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.15
			Depth to saturated zone	0.61		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24A:						
Seabrook------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.92
			Depth to saturated zone	0.99	Too sandy	0.50
25A, 25B:						
Slagle--------------	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
			Cutbanks cave	0.10		
26A:						
State---------------	Somewhat limited		Somewhat limited		Not limited	
	Flooding	0.40	Depth to saturated zone	0.15		
			Cutbanks cave	0.10		
27B:						
Tarboro-------------	Somewhat limited		Very limited		Very limited	
	Flooding	0.40	Cutbanks cave	1.00	Droughty	1.00
28A:						
Tomotley------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	1.00		
29B:						
Uchee---------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.15
			Depth to saturated zone	0.61		
30C:						
Uchee---------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.01	Cutbanks cave	1.00	Droughty	0.15
			Depth to saturated zone	0.61	Slope	0.01
			Slope	0.01		
Slagle--------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.01	Depth to saturated zone	0.99	Slope	0.01
			Cutbanks cave	0.10		
			Slope	0.01		
31:						
Udorthents----------	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
			Cutbanks cave	0.10		
32A:						
Warne---------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	1.00	Cutbanks cave	1.00		
	Shrink-swell	0.50	Too clayey	0.50		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33A:						
Yemassee------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Cutbanks cave	0.10		

Sewage Disposal

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
1A, 1B:				
Altavista	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.99
			Flooding	0.40
	Flooding	0.40		
2B:				
Appling	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
			Slope	0.68
	Slow water movement	0.50		
2C:				
Appling	Very limited		Very limited	
	Seepage, bottom layer	1.00	Slope	1.00
			Seepage	1.00
	Slow water movement	0.50		0
	Slope	0.37		
3A:				
Augusta	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
			Flooding	0.40
	Slow water movement	0.50		
4A:				
Bibb	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
Chastain	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00		
5A:				
Bojac	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
			Flooding	0.40
	Depth to saturated zone	0.40		
	Flooding	0.40		

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
6A:				
Buncombe	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Filtering capacity	1.00		
7A:				
Chastain	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00		
8A:				
Chewacla	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
9A:				
Craven	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
9B:				
Craven	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	0.32
10C3:				
Craven	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	1.00
	Slope	0.01		
11A:				
Dogue	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
11B:				
Dogue	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	0.32

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
12A:				
Emporia	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00		
Slagle	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.50
	Slow water movement	1.00	Depth to saturated zone	0.19
12B:				
Emporia	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Slope	0.32
Slagle	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.50
	Slow water movement	1.00	Slope	0.32
			Depth to saturated zone	0.19
12C:				
Emporia	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Slope	1.00
	Slope	0.01		
Slagle	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.50
	Slope	0.01	Depth to saturated zone	0.19
13A:				
Eulonia	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00		
13B:				
Eulonia	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	0.32

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
13C:				
Eulonia-------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	1.00
			Seepage	1.00
	Seepage, bottom layer	1.00		
14B:				
Faceville-----------	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32
14C:				
Faceville-----------	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
	Slope	0.01		
15B:				
Georgeville---------	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Slope	0.68
			Seepage	0.50
15C:				
Georgeville---------	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
	Slope	0.37		
15D:				
Georgeville---------	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
16B:				
Helena--------------	Very limited		Somewhat limited	
	Slow water movement	1.00	Depth to saturated zone	0.75
	Depth to saturated zone	1.00	Slope	0.68
16C:				
Helena--------------	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Depth to saturated zone	0.75
	Depth to saturated zone	1.00		
	Slope	0.37		
17A:				
Myatt---------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.68	Seepage	0.99

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
18B:				
Nansemond	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
19A:				
Nawney	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Mattan	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
20D:				
Nevarc	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Depth to saturated zone	0.75
	Depth to saturated zone	1.00		
			Seepage	0.50
	Slope	0.84		
Emporia	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Seepage	1.00
	Slow water movement	1.00		
	Slope	0.84		
20F:				
Nevarc	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Depth to saturated zone	0.75
	Depth to saturated zone	1.00		
			Seepage	0.50
	Slope	1.00		
Emporia	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
			Seepage	1.00
	Slope	1.00		
	Slow water movement	1.00		
21B:				
Ocilla	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage, bottom layer	1.00		
			Slope	
	Slow water movement	0.50		

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
22A:				
Roanoke	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	0.50
23B:				
Rumford	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
			Slope	0.32
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
			Slope	0.32
	Depth to saturated zone	0.99		
24A:				
Seabrook	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
			Depth to saturated zone	1.00
	Seepage, bottom layer	1.00		
	Filtering capacity	1.00		
25A:				
Slagle	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.50
			Depth to saturated zone	0.19
	Slow water movement	1.00		
25B:				
Slagle	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.50
			Slope	0.32
	Slow water movement	1.00	Depth to saturated zone	0.19
26A:				
State	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
			Flooding	0.40
	Slow water movement	0.50		
	Depth to saturated zone	0.40		
27B:				
Tarboro	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
			Flooding	0.40
	Seepage, bottom layer	1.00	Slope	0.08
	Flooding	0.40		

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28A:				
Tomotley------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Seepage	0.50
	Slow water movement	0.68	Flooding	0.40
29B:				
Uchee---------------	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Depth to saturated zone	0.99	Slope	0.08
30C:				
Uchee---------------	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Depth to saturated zone	0.99	Slope	1.00
	Slope	0.01		
Slagle--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Slow water movement	1.00	Seepage	0.50
	Slope	0.01	Depth to saturated zone	0.19
31:				
Udorthents----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.68	Slope	0.68
			Seepage	0.32
32A:				
Warne---------------	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Flooding	0.40
33A:				
Yemassee------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	1.00

Landfills

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Flooding	0.40	Flooding	0.40		
2B:						
Appling	Very limited		Not limited		Somewhat limited	
	Seepage, bottom layer	1.00			Too clayey	0.50
					Seepage	0.21
2C:						
Appling	Very limited		Somewhat limited		Somewhat limited	
	Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
					Slope	0.37
	Slope	0.37			Seepage	0.21
3A:						
Augusta	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
					Depth to saturated zone	0.99
	Seepage, bottom layer	1.00	Flooding	0.40		
	Flooding	0.40				
4A:						
Bibb	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
Chastain	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Too clayey	0.50			Too clayey	0.50
5A:						
Bojac	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
	Seepage, bottom layer	1.00	Seepage	1.00		
			Flooding	0.40		
	Flooding	0.40				
6A:						
Buncombe	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50				

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
7A:						
Chastain------------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Hard to compact	1.00
	Too clayey	0.50			Too clayey	0.50
8A:						
Chewacla------------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50				
9A, 9B:						
Craven--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Too clayey	1.00			Depth to saturated zone	0.47
10C3:						
Craven--------------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
	Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.47
	Slope	0.01			Slope	0.01
11A, 11B:						
Dogue---------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Too clayey	1.00			Depth to saturated zone	0.86
12A, 12B:						
Emporia-------------	Somewhat limited		Not limited		Not limited	
	Depth to saturated zone	0.09				
Slagle--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.19	Depth to saturated zone	0.47
12C:						
Emporia-------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.09	Slope	0.01	Slope	0.01
	Slope	0.01				
Slagle--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.19	Depth to saturated zone	0.47
	Slope	0.01	Slope	0.01	Slope	0.01
13A, 13B:						
Eulonia-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Seepage, bottom layer	1.00			Depth to saturated zone	0.47
					Seepage	0.21

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
13C:						
Eulonia-------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Seepage, bottom layer	1.00	Slope	0.01	Depth to saturated zone	0.47
	Slope	0.01			Seepage	0.21
14B:						
Faceville-----------	Somewhat limited		Not limited		Not limited	
	Too clayey	0.50				
14C:						
Faceville-----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too clayey	0.50	Slope	0.01	Slope	0.01
	Slope	0.01				
15B:						
Georgeville---------	Somewhat limited		Not limited		Somewhat limited	
	Too clayey	0.50			Too clayey	0.50
15C:						
Georgeville---------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too clayey	0.50	Slope	0.37	Too clayey	0.50
	Slope	0.37			Slope	0.37
15D:						
Georgeville---------	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too clayey	0.50			Too clayey	0.50
16B:						
Helena--------------	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Depth to saturated zone	0.75	Too clayey	1.00
	Depth to saturated zone	0.99			Hard to compact	1.00
					Depth to saturated zone	0.86
16C:						
Helena--------------	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Depth to saturated zone	0.75	Too clayey	1.00
	Depth to saturated zone	0.99	Slope	0.37	Hard to compact	1.00
	Slope	0.37			Depth to saturated zone	0.86
17A:						
Myatt---------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
18B:						
Nansemond-----------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
19A:						
Nawney	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00		
Mattan	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Organic matter content	1.00
20D:						
Nevarc	Very limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.99	Slope	0.84	Depth to saturated zone	0.86
	Slope	0.84	Depth to saturated zone	0.75	Slope	0.84
	Too clayey	0.50			Too clayey	0.50
Emporia	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.84	Slope	0.84	Slope	0.84
	Depth to saturated zone	0.09				
20F:						
Nevarc	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.75	Depth to saturated zone	0.86
	Too clayey	0.50			Too clayey	0.50
Emporia	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to saturated zone	0.09				
21B:						
Ocilla	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Seepage	1.00	Depth to saturated zone	0.86
	Too sandy	0.50			Too sandy	0.50
22A:						
Roanoke	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
	Too clayey	1.00			Hard to compact	1.00
23B:						
Rumford	Very limited		Very limited		Somewhat limited	
	Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Uchee	Not limited		Very limited		Not limited	
			Seepage	1.00		

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24A:						
Seabrook	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00			Depth to saturated zone	0.47
25A, 25B:						
Slagle	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.19	Depth to saturated zone	0.47
26A:						
State	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Seepage, bottom layer	1.00	Flooding	0.40		
	Flooding	0.40				
27B:						
Tarboro	Very limited		Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Seepage	1.00
	Flooding	0.40				
28A:						
Tomotley	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00	Flooding	0.40		
	Flooding	0.40				
29B:						
Uchee	Not limited		Very limited		Not limited	
			Seepage	1.00		
30C:						
Uchee	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.01	Seepage	1.00	Slope	0.01
			Slope	0.01		
Slagle	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.19	Depth to saturated zone	0.47
	Slope	0.01	Slope	0.01	Slope	0.01
31:						
Udorthents	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32A:						
Warne---------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	1.00	Seepage	1.00	Too clayey	1.00
	Seepage, bottom layer	1.00	Flooding	0.40	Hard to compact	1.00
33A:						
Yemassee------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Source of Gravel and Sand

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
1A, 1B:				
Altavista	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00
2B, 2C:				
Appling	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
3A:				
Augusta	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.38
4A:				
Bibb	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.05
	Thickest layer	0.00	Bottom layer	0.52
Chastain	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
5A:				
Bojac	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.04
	Thickest layer	0.00	Bottom layer	0.68
6A:				
Buncombe	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.51
7A:				
Chastain	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
8A:				
Chewacla	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
9A, 9B:				
Craven	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
10C3:				
Craven--------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
11A, 11B:				
Dogue---------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
12A, 12B, 12C:				
Emporia-------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.01
Slagle--------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.05
13A, 13B, 13C:				
Eulonia-------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
14B, 14C:				
Faceville-----------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
15B, 15C, 15D:				
Georgeville---------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
16B, 16C:				
Helena--------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
17A:				
Myatt---------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
18B:				
Nansemond-----------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.03
19A:				
Nawney--------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
Mattan--------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
20D, 20F:				
Nevarc	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Emporia	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.01
21B:				
Ocilla	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.10
22A:				
Roanoke	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
23B:				
Rumford	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.37
Uchee	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.07
24A:				
Seabrook	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.07
	Thickest layer	0.00	Bottom layer	0.13
25A, 25B:				
Slagle	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.05
26A:				
State	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
27B:				
Tarboro	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.69
28A:				
Tomotley	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.11
29B:				
Uchee	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.07

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
30C:				
Uchee	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.07
Slagle	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.05
31:				
Udorthents	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.01
32A:				
Warne	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.10
33A:				
Yemassee	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00

Source of Reclamation Material, Roadfill, and Topsoil

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
1A, 1B:						
Altavista	Fair		Fair		Fair	
	Organic matter content low	0.02	Wetness depth	0.53	Wetness depth	0.53
	Too acid	0.50				
2B:						
Appling	Poor		Good		Poor	
	Too clayey	0.00			Too clayey	0.00
	Organic matter content low	0.02			Too acid	0.98
	Too acid	0.16				
2C:						
Appling	Poor		Good		Poor	
	Too clayey	0.00			Too clayey	0.00
	Organic matter content low	0.02			Slope	0.63
	Too acid	0.16			Too acid	0.98
3A:						
Augusta	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.14	Wetness depth	0.14
	Organic matter content low	0.12			Too acid	0.68
	Too acid	0.16				
4A:						
Bibb	Fair		Poor		Poor	
	Too acid	0.16	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88			Too acid	0.68
					Hard to reclaim (rock fragments)	0.92
Chastain	Fair		Poor		Poor	
	Too clayey	0.08	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.16	Low strength	0.00	Too clayey	0.08
			Shrink-swell	0.87	Too acid	0.68
5A:						
Bojac	Poor		Good		Fair	
	Wind erosion	0.00			Too acid	0.98
	Organic matter content low	0.12				
	Too acid	0.54				
6A:						
Buncombe	Poor		Good		Fair	
	Wind erosion	0.00			Too sandy	0.02
	Too sandy	0.02			Too acid	0.68
	Droughty	0.09			Hard to reclaim (rock fragments)	0.92

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
7A:						
Chastain	Fair		Poor		Poor	
	Too clayey	0.08	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.16	Low strength	0.00	Too clayey	0.08
			Shrink-swell	0.87	Too acid	0.68
8A:						
Chewacla	Fair		Poor		Fair	
	Too acid	0.50	Low strength	0.00	Wetness depth	0.04
			Wetness depth	0.04	Too acid	0.68
9A, 9B:						
Craven	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Too acid	0.12	Shrink-swell	0.87	Too acid	0.59
	Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
10C3:						
Craven	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.59
	Too acid	0.50	Wetness depth	0.89	Wetness depth	0.89
11A, 11B:						
Dogue	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.12	Wetness depth	0.53	Wetness depth	0.53
	Too acid	0.74	Shrink-swell	0.87		
12A, 12B:						
Emporia	Fair		Good		Fair	
	Organic matter content low	0.12			Too acid	0.98
	Too acid	0.54				
Slagle	Fair		Fair		Fair	
	Too acid	0.12	Wetness depth	0.89	Wetness depth	0.89
	Organic matter content low	0.12				
12C:						
Emporia	Fair		Good		Fair	
	Organic matter content low	0.12			Too acid	0.98
	Too acid	0.54				
Slagle	Fair		Fair		Fair	
	Too acid	0.12	Wetness depth	0.89	Wetness depth	0.89
	Organic matter content low	0.12				
13A, 13B, 13C:						
Eulonia	Poor		Fair		Poor	
	Too clayey	0.00	Wetness depth	0.89	Too clayey	0.00
	Organic matter content low	0.02			Too acid	0.68
	Too acid	0.16			Wetness depth	0.89

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14B, 14C:						
Faceville-----------	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.78	Too clayey	0.00
	Organic matter content low	0.02			Too acid	0.98
	Too acid	0.54				
15B:						
Georgeville---------	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Too clayey	0.00
	Organic matter content low	0.02			Too acid	0.98
	Too acid	0.16				
15C:						
Georgeville---------	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Too clayey	0.00
	Organic matter content low	0.02			Slope	0.63
					Too acid	0.98
	Too acid	0.16				
15D:						
Georgeville---------	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Slope	0.00
	Organic matter content low	0.02	Slope	0.50	Too clayey	0.00
					Too acid	0.98
	Too acid	0.16				
16B:						
Helena--------------	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.02	Shrink-swell	0.25	Wetness depth	0.53
			Wetness depth	0.53	Too acid	0.68
	Too acid	0.16				
16C:						
Helena--------------	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.02	Shrink-swell	0.25	Wetness depth	0.53
			Wetness depth	0.53	Slope	0.63
	Too acid	0.16				
17A:						
Myatt---------------	Fair		Poor		Poor	
	Too acid	0.16	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.50			Too acid	0.68
18B:						
Nansemond-----------	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.53	Wetness depth	0.53
	Organic matter content low	0.12			Too acid	0.82
	Too acid	0.26				
19A:						
Nawney--------------	Fair		Poor		Poor	
	Too acid	0.54	Wetness depth	0.00	Wetness depth	0.00
			Low strength	0.00	Too acid	0.98
			Shrink-swell	0.87		

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Mattan	Poor		Poor		Poor	
	Too acid	0.00	Wetness depth	0.00	Wetness depth	0.00
					Organic matter content high	0.00
					Too acid	0.68
20D:						
Nevarc	Fair		Poor		Fair	
	Too clayey	0.08	Low strength	0.00	Too clayey	0.05
	Organic matter content low	0.12	Wetness depth	0.53	Slope	0.16
	Too acid	0.20	Shrink-swell	0.95	Wetness depth	0.53
Emporia	Fair		Good		Fair	
	Organic matter content low	0.12			Slope	0.16
	Too acid	0.54			Too acid	0.98
20F:						
Nevarc	Fair		Poor		Poor	
	Too clayey	0.08	Slope	0.00	Slope	0.00
	Organic matter content low	0.12	Low strength	0.00	Too clayey	0.05
	Too acid	0.20	Wetness depth	0.53	Wetness depth	0.53
Emporia	Fair		Poor		Poor	
	Organic matter content low	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54			Too acid	0.98
21B:						
Ocilla	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.53	Too sandy	0.06
	Too sandy	0.06			Wetness depth	0.53
	Too acid	0.16			Too acid	0.68
22A:						
Roanoke	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.08	Low strength	0.00	Too clayey	0.00
	Organic matter content low	0.12	Shrink-swell	0.89	Too acid	0.50
23B:						
Rumford	Poor		Good		Good	
	Wind erosion	0.00				
	Organic matter content low	0.12				
	Too acid	0.99				
Uchee	Poor		Fair		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.68
	Organic matter content low	0.12				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
24A:						
Seabrook	Poor		Fair		Poor	
	Wind erosion	0.00	Wetness depth	0.89	Too sandy	0.00
	Too sandy	0.00			Wetness depth	0.89
	Droughty	0.01				
25A, 25B:						
Slagle	Fair		Fair		Fair	
	Too acid	0.12	Wetness depth	0.89	Wetness depth	0.89
	Organic matter content low	0.12				
26A:						
State	Fair		Good		Fair	
	Organic matter content low	0.12			Too acid	0.98
	Too acid	0.54				
27B:						
Tarboro	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Organic matter content low	0.02				
28A:						
Tomotley	Fair		Poor		Poor	
	Too acid	0.16	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88			Too acid	0.68
29B:						
Uchee	Poor		Fair		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.68
	Organic matter content low	0.12				
30C:						
Uchee	Poor		Fair		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.68
	Organic matter content low	0.12				
Slagle	Fair		Fair		Fair	
	Too acid	0.12	Wetness depth	0.89	Wetness depth	0.89
	Organic matter content low	0.12				
31:						
Udorthents	Fair		Fair		Fair	
	Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
	Too acid	0.54			Too acid	0.98

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32A:						
Warne---------------	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
	Too acid	0.50	Shrink-swell	0.97	Too acid	0.98
33A:						
Yemassee------------	Fair		Poor		Poor	
	Too acid	0.16	Wetness depth	0.00	Wetness depth	0.00
					Too acid	0.68

Ponds and Embankments

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1A, 1B:						
Altavista	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	0.10
			Seepage	0.01	Depth to saturated zone	0.01
2B:						
Appling	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
2C:						
Appling	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
	Slope	0.01				
3A:						
Augusta	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.38		
4A:						
Bibb	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.52		
Chastain	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Slow refill	1.00
			Hard to pack	0.22	Cutbanks cave	0.10
5A:						
Bojac	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.68	Depth to water	1.00
6A:						
Buncombe	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.51	Depth to water	1.00
7A:						
Chastain	Not limited		Very limited		Very limited	
			Depth to saturated zone	1.00	Slow refill	1.00
			Hard to pack	0.22	Cutbanks cave	0.10
8A:						
Chewacla	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
			Piping	0.01	Cutbanks cave	0.10

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
9A, 9B:						
Craven--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.02	Depth to saturated zone	0.86	Slow refill	0.98
					Cutbanks cave	0.10
			Hard to pack	0.42	Depth to saturated zone	0.06
10C3:						
Craven--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.02	Depth to saturated zone	0.86	Slow refill	0.98
					Cutbanks cave	0.10
					Depth to saturated zone	0.06
11A, 11B:						
Dogue---------------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	0.99	Slow refill	0.95
					Cutbanks cave	0.10
					Depth to saturated zone	0.01
12A, 12B, 12C:						
Emporia-------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.57	Depth to saturated zone	0.09	Depth to water	1.00
			Seepage	0.01		
Slagle--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	0.86	Depth to water	1.00
			Seepage	0.05		
13A, 13B, 13C:						
Eulonia-------------	Very limited		Somewhat limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	0.10
					Depth to saturated zone	0.06
			Seepage	0.04		
			Piping	0.01		
14B, 14C:						
Faceville-----------	Somewhat limited		Very limited		Very limited	
	Seepage	0.70	Piping	1.00	Depth to water	1.00
15B:						
Georgeville---------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Piping	0.43	Depth to water	1.00
15C:						
Georgeville---------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Piping	0.43	Depth to water	1.00
	Slope	0.01				
15D:						
Georgeville---------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Piping	0.43	Depth to water	1.00
	Slope	0.12				

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16B:						
Helena--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.05	Depth to saturated zone	0.99	Depth to water	1.00
16C:						
Helena--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.05	Depth to saturated zone	0.99	Depth to water	1.00
	Slope	0.01				
17A:						
Myatt---------------	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Seepage	0.02		
18B:						
Nansemond-----------	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	0.10
			Seepage	0.03	Depth to saturated zone	0.01
19A:						
Nawney--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.70	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00	Slow refill	0.30
			Piping	0.98		
Mattan--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.70	Organic matter content	1.00	Cutbanks cave	1.00
			Ponding	1.00	Slow refill	0.30
			Depth to saturated zone	1.00		
20D:						
Nevarc--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.70	Depth to saturated zone	0.99	Depth to water	1.00
	Slope	0.01				
Emporia-------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.57	Depth to saturated zone	0.09	Depth to water	1.00
	Slope	0.01	Seepage	0.01		
20F:						
Nevarc--------------	Somewhat limited		Very limited		Very limited	
	Seepage	0.70	Depth to saturated zone	0.99	Depth to water	1.00
	Slope	0.50				
Emporia-------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.57	Depth to saturated zone	0.09	Depth to water	1.00
	Slope	0.50	Seepage	0.01		

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21B:						
Ocilla	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
			Seepage	0.10	Depth to saturated zone	0.01
22A:						
Roanoke	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
					Cutbanks cave	0.10
23B:						
Rumford	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.37	Depth to water	1.00
Uchee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.07	Depth to water	1.00
24A:						
Seabrook	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	1.00
			Seepage	0.13	Depth to saturated zone	0.06
25A, 25B:						
Slagle	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	0.86	Depth to water	1.00
			Seepage	0.05		
26A:						
State	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.04	Depth to water	1.00
27B:						
Tarboro	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.69	Depth to water	1.00
28A:						
Tomotley	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.11		
29B:						
Uchee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.07	Depth to water	1.00
30C:						
Uchee	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.07	Depth to water	1.00
Slagle	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	0.86	Depth to water	1.00
			Seepage	0.05		

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31:						
Udorthents----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.57	Depth to saturated zone	0.86	Slow refill	0.43
			Seepage	0.01	Cutbanks cave	0.10
					Depth to saturated zone	0.06
32A:						
Warne---------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.10		
			Piping	0.04		
33A:						
Yemassee------------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Seepage	0.01		

Engineering Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
1A:												
Altavista-------	0-11	Fine sandy loam, sandy loam, loam, silt loam, very fine sandy loam	SC, SC-SM, ML	A-6, A-2-4, A-4	0	0	98-100	95-100	55-100	30-90	21-40	6-16
	11-38	Loam, clay loam, sandy clay loam	CL, SC-SM, SC	A-7-6, A-6	0	0	98-100	95-100	75-100	35-80	27-44	12-25
	38-72	Sandy clay loam, sandy loam, loamy sand, sand	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2-4	0	0	90-100	80-100	40-90	4-55	0-44	NP-25
1B:												
Altavista-------	0-11	Fine sandy loam, sandy loam, loam, silt loam, very fine sandy loam	ML, SC-SM, SC	A-6, A-2-4, A-4	0	0	98-100	95-100	55-100	30-90	21-40	6-16
	11-38	Loam, clay loam, sandy clay loam	CL, SC, SC-SM	A-7-6, A-6	0	0	98-100	95-100	75-100	35-80	27-44	12-25
	38-72	Sandy clay loam, sandy loam, loamy sand, sand	SC-SM, SC, CL-ML, CL	A-4, A-6, A-2-4	0	0	90-100	80-100	40-90	4-55	0-44	NP-25
2B:												
Appling---------	0-11	Sandy loam, fine sandy loam, coarse sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0-2	92-100	80-100	45-85	22-55	9-20	1-8
	11-33	Clay, sandy clay, clay loam, sandy clay loam	SM, ML	A-6, A-7-6, A-4	0	0-2	93-100	85-100	70-100	30-95	25-49	6-15
	33-43	Sandy clay loam, clay loam	SM, ML	A-4, A-2-4	0	0-2	93-100	85-100	68-100	30-80	20-34	2-8
	43-72	Sandy loam, loam, sandy clay loam	SM, SC-SM, SC, CL, ML	A-2-4, A-4	0	0-2	92-100	80-100	48-95	24-75	9-27	1-8
2C:												
Appling---------	0-11	Sandy loam, fine sandy loam, coarse sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0-2	92-100	80-100	45-85	22-55	9-20	1-8
	11-33	Clay, sandy clay, clay loam, sandy clay loam	SM, ML	A-7-6, A-4, A-6	0	0-2	93-100	85-100	70-100	30-95	25-49	6-15
	33-43	Sandy clay loam, clay loam	SM, ML	A-2-4, A-4	0	0-2	93-100	85-100	68-100	30-80	20-34	2-8
	43-72	Sandy loam, loam, sandy clay loam	SM, SC-SM, SC, ML, CL	A-2-4, A-4	0	0-2	92-100	80-100	48-95	24-75	9-27	1-8

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
3A:												
Augusta----------	0-11	Sandy loam, fine sandy loam, loam	SC, SC-SM	A-4, A-2-4	0	0	95-100	85-100	50-95	25-75	17-35	2-13
	11-46	Sandy clay loam, clay loam, loam	CL, SC	A-7-6, A-6	0	0	95-100	85-100	70-100	30-80	29-44	13-25
	46-84	Sand, sandy loam, loamy sand, loamy fine sand, gravelly sand	SC, SC-SM, SP-SM	A-4, A-2-4, A-1	0	0	90-100	70-100	35-85	4-45	0-31	NP-13
4A:												
Bibb------------	0-16	Fine sandy loam, sandy loam, silt loam, loam, loamy sand, sand	SM, CL-ML, ML, SC-SM, CL	A-2-4, A-4	0	0	98-100	80-100	40-100	5-90	0-37	NP-13
	16-40	Sandy loam, fine sandy loam, loam, silt loam, stratified sandy loam to silt loam	SC-SM, CL, SM, ML, CL-ML	A-1-b, A-4, A-2-4	0	0	98-100	80-100	50-100	25-90	17-39	2-19
	40-70	Gravelly sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, loam, silt loam	CL-ML, ML, SC-SM, SM, CL, SP-SC	A-4, A-2-4, A-1-b	0	0-7	70-100	55-100	30-100	3-90	0-43	NP-18
Chastain---------	0-3	Loam, silt loam	ML, CL	A-4, A-6, A-7-6	0	0	100	100	85-100	60-90	28-51	10-19
	3-49	Clay loam, silty clay loam, clay, silty clay	CH, CL	A-7	0	0	100	100	90-100	70-95	45-72	25-43
	49-84	Clay loam, sandy clay loam, silty clay loam, clay, silty clay	CL, MH, ML, CH	A-6, A-7	0	0	100	100	80-100	35-95	36-72	17-43
5A:												
Bojac-----------	0-13	Loamy sand, loamy fine sand, sandy loam, fine sandy loam, loam, gravelly loamy sand	SC-SM, SM	A-4, A-2-4, A-1-b	0	0	65-100	50-100	25-95	8-75	0-22	NP-4
	13-48	Sandy loam, fine sandy loam, loam, sandy clay loam, gravelly sandy loam	CL, SC	A-2-4, A-4	0	0	65-100	50-100	30-95	15-75	21-33	6-15
	48-66	Sand, loamy sand, loamy fine sand, gravelly sand, very gravelly sand	SM, SP, SP-SM, SC-SM	A-2-4, A-3, A-1-b	0	0	50-100	35-100	18-85	2-45	0-21	NP-4

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
6A:												
Buncombe--------	0-7	Loamy sand, sand, loamy fine sand	SP-SM, SC-SM, SM	A-1-b, A-3, A-2-4	0	0	100	100	50-85	5-45	0-26	NP-7
	7-58	Loamy sand, loamy fine sand, sand	SP-SM, SC-SM, SM	A-2-4, A-3, A-1-b	0	0	100	100	50-85	5-45	0-25	NP-7
	58-82	Gravelly sand, sand, loam	SM, SW-SM, SC-SM	A-2-4, A-3, A-1-b	0	0-5	70-100	50-100	25-95	2-75	0-27	NP-10
7A:												
Chastain--------	0-3	Loam, silt loam	CL, ML	A-7-6, A-6, A-4	0	0	100	100	85-100	60-90	28-51	10-19
	3-49	Clay loam, silty clay loam, clay, silty clay	CH, CL	A-7	0	0	100	100	90-100	70-95	45-72	25-43
	49-84	Clay loam, sandy clay loam, silty clay loam, clay, silty clay	CH, CL, MH, ML	A-6, A-7	0	0	100	100	80-100	35-95	36-72	17-43
8A:												
Chewacla--------	0-6	Loam, fine sandy loam, sandy loam, silt loam, clay loam	CL-ML, ML, CL	A-7, A-6, A-4	0	0	95-100	92-100	55-100	30-90	22-52	6-24
	6-32	Loam, silty clay loam, clay loam, silt loam, sandy loam, fine sandy loam, sandy clay loam	CL	A-6, A-7-6	0	0	95-100	92-100	55-100	30-95	28-47	12-24
	32-84	Silty clay loam, loam, clay loam, silt loam, sandy loam, sandy clay loam	CL	A-6, A-7-6	0	0	95-100	92-100	55-100	30-95	28-47	12-24
9A:												
Craven----------	0-6	Loam, fine sandy loam, silt loam	CL-ML, SC, CL	A-4, A-6	0	0	100	100	68-100	39-90	19-41	3-19
	6-54	Clay, silty clay, silty clay loam, clay loam	CH, CL	A-7-6	0	0	100	100	86-100	67-95	43-67	25-44
	54-64	Sandy clay loam, loam, sandy loam, loamy sand, clay loam	SC, CL, SC-SM	A-2-4, A-7-6, A-6	0	0	100	100	50-95	15-75	18-46	2-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
9B:												
Craven----------	0-6	Loam, fine sandy loam, silt loam	CL, CL-ML, SC	A-4, A-6	0	0	100	100	68-100	39-90	19-41	3-19
	6-54	Clay, silty clay, silty clay loam, clay loam	CH, CL	A-7-6	0	0	100	100	86-100	67-95	43-67	25-44
	54-64	Sandy clay loam, loam, sandy loam, loamy sand, clay loam	SC, CL, SC-SM	A-2-4, A-6, A-7-6	0	0	100	100	50-95	15-75	18-46	2-25
10C3:												
Craven----------	0-4	Clay loam	SC-SM, CL	A-6, A-7-6	0	0	100	100	86-100	67-80	38-53	19-29
	4-23	Clay, silty clay, silty clay loam, clay loam	CH, CL	A-7	0	0	100	100	86-100	67-95	43-67	25-44
	23-70	Clay loam, sandy clay loam, clay, silty clay loam	SC, CH, CL	A-7, A-6	0	0	100	100	76-100	33-95	39-67	21-44
11A:												
Dogue-----------	0-10	Loam, fine sandy loam, silt loam	CL-ML, ML, SM, CL	A-4	0	0	85-100	80-100	55-100	30-90	19-39	3-17
	10-21	Clay loam, clay, sandy clay, sandy clay loam	CH, CL, SC	A-2-6, A-7	0	0	85-100	80-100	65-100	30-95	37-67	19-44
	21-45	Clay, clay loam, sandy clay, sandy clay loam	CL, CH, SC	A-7	0	0	85-100	80-100	65-100	30-95	41-67	22-44
	45-60	Sandy clay loam, stratified sand to sandy clay loam	SM, SC-SM, SW, SC, CL	A-2-6, A-7-6	0	0	75-100	65-100	30-90	3-55	0-46	NP-25
11B:												
Dogue-----------	0-10	Loam, fine sandy loam, silt loam	CL, CL-ML, SM, ML	A-4	0	0	85-100	80-100	55-100	30-90	19-39	3-17
	10-21	Clay loam, clay, sandy clay, sandy clay loam	CH, CL, SC	A-2-6, A-7	0	0	85-100	80-100	65-100	30-95	37-67	19-44
	21-45	Clay, clay loam, sandy clay, sandy clay loam	SC, CH, CL	A-7	0	0	85-100	80-100	65-100	30-95	41-67	22-44
	45-60	Sandy clay loam, stratified sand to sandy clay loam	CL, SC, SW, SC-SM, SM	A-2-6, A-7-6	0	0	75-100	65-100	30-90	3-55	0-46	NP-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
12A:												
Emporia---------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	SC-SM, CL-ML, SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-14	Loamy fine sand, fine sandy loam, sandy loam, loamy sand, gravelly fine sandy loam, loam	SM, CL-ML, SC-SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	14-18	Fine sandy loam, sandy loam, loam, gravelly fine sandy loam	SC-SM, CL, SC	A-2-4, A-6	0	0-3	85-100	70-100	40-95	20-75	24-36	9-17
	18-41	Sandy clay loam, clay loam, sandy loam, loam, gravelly sandy clay loam, fine sandy loam	SC-SM, CL, SC	A-6, A-7-6	0	0-3	85-100	70-100	40-100	20-80	27-44	12-25
	41-54	Sandy clay, clay, clay loam, sandy clay loam, loam, coarse sandy loam, sandy loam, gravelly sandy clay	SC, CL-ML, SC-SM, CL	A-6, A-2-4, A-7-6	0	0-3	85-100	70-100	45-100	20-95	20-53	6-32
	54-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	ML, SC-SM, CL-ML, CL	A-2-4, A-4, A-6	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	CL-ML, SC-SM	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	CL, SC, SC-SM	A-2, A-6	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	CL, SC, CL-ML, SC-SM	A-7-6, A-6, A-4	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
12B:												
Emporia---------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	CL-ML, SM, SC-SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-14	Loamy fine sand, fine sandy loam, sandy loam, loamy sand, gravelly fine sandy loam, loam	SC-SM, SM, CL-ML	A-2-4, A-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	14-18	Fine sandy loam, sandy loam, loam, gravelly fine sandy loam	CL, SC, SC-SM	A-2-4, A-6	0	0-3	85-100	70-100	40-95	20-75	24-36	9-17
	18-41	Sandy clay loam, clay loam, sandy loam, loam, gravelly sandy clay loam, fine sandy loam	SC-SM, CL, SC	A-6, A-7-6	0	0-3	85-100	70-100	40-100	20-80	27-44	12-25
	41-54	Sandy clay, clay, clay loam, sandy clay loam, loam, sandy loam, coarse sandy loam, gravelly sandy clay	SC-SM, CL, SC, CL-ML	A-7-6, A-2-4, A-6	0	0-3	85-100	70-100	45-100	20-95	20-53	6-32
	54-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	CL, ML, SC-SM, CL-ML	A-6, A-2-4, A-4	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	CL-ML, SC-SM	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	SC-SM, CL, SC	A-2, A-6	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	CL, CL-ML, SC, SC-SM	A-7-6, A-6, A-4	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
12C:												
Emporia---------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	CL-ML, SM, SC-SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-14	Loamy fine sand, fine sandy loam, sandy loam, loamy sand, loam, gravelly fine sandy loam	CL-ML, SM, SC-SM	A-2-4, A-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	14-18	Fine sandy loam, sandy loam, loam, gravelly fine sandy loam	SC-SM, CL, SC	A-6, A-2-4	0	0-3	85-100	70-100	40-95	20-75	24-36	9-17
	18-41	Sandy clay loam, clay loam, sandy loam, loam, gravelly sandy clay loam, fine sandy loam	SC-SM, CL, SC	A-7-6, A-6	0	0-3	85-100	70-100	40-100	20-80	27-44	12-25
	41-54	Sandy clay, clay, clay loam, sandy clay loam, loam, coarse sandy loam, sandy loam, gravelly sandy clay	CL-ML, SC-SM, CL, SC	A-7-6, A-6, A-2-4	0	0-3	85-100	70-100	45-100	20-95	20-53	6-32
	54-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	CL, ML, SC-SM, CL-ML	A-4, A-6, A-2-4	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	CL-ML, SC-SM	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	SC, SC-SM, CL	A-2, A-6	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	CL-ML, CL, SC, SC-SM	A-4, A-6, A-7-6	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
13A:												
Eulonia---------	0-7	Fine sandy loam, loam, silt loam	SC-SM, SC	A-4	0	0	100	95-100	65-100	40-90	17-35	2-13
	7-31	Clay, sandy clay, clay loam	CL, CH	A-7-6	0	0	100	95-100	80-100	45-95	42-61	24-39
	31-45	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, CL	A-6	0	0	100	95-100	75-100	35-80	29-53	13-32
	45-75	Sandy loam, sand, clay	CL-ML, CL, SC, SC-SM, SM	A-6, A-2-4, A-4	0	0	100	95-100	50-100	5-95	0-52	NP-32
13B:												
Eulonia---------	0-7	Fine sandy loam, loam, silt loam	SC-SM, SC	A-4	0	0	100	95-100	65-100	40-90	17-35	2-13
	7-31	Clay, sandy clay, clay loam	CH, CL	A-7-6	0	0	100	95-100	80-100	45-95	42-61	24-39
	31-45	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, CL	A-6	0	0	100	95-100	75-100	35-80	29-53	13-32
	45-75	Sandy loam, sand, clay	CL-ML, CL, SC, SC-SM, SM	A-6, A-2-4, A-4	0	0	100	95-100	50-100	5-95	0-52	NP-32
13C:												
Eulonia---------	0-7	Fine sandy loam, loam, silt loam	SC-SM, SC	A-4	0	0	100	95-100	65-100	40-90	17-35	2-13
	7-31	Clay, sandy clay, clay loam	CL, CH	A-7-6	0	0	100	95-100	80-100	45-95	42-61	24-39
	31-45	Sandy clay loam, clay loam, sandy clay	CL, SC, SC-SM	A-6	0	0	100	95-100	75-100	35-80	29-53	13-32
	45-75	Sandy loam, sand, clay	SC-SM, SC, CL, CL-ML, SM	A-6, A-2-4, A-4	0	0	100	95-100	50-100	5-95	0-52	NP-32
14B:												
Faceville-------	0-9	Fine sandy loam, sandy loam, loamy fine sand, loamy sand	SM, SC-SM	A-2-4, A-4	0	0	90-100	85-100	45-85	15-55	9-20	NP-2
	9-30	Sandy clay, clay loam, clay	SM, ML	A-4	0	0	90-100	85-100	70-100	40-95	20-42	5-9
	30-67	Clay loam, sandy clay, clay	ML	A-4, A-6, A-7	0	0	90-100	85-100	70-100	40-95	31-45	5-11

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
14C:												
Faceville-------	0-9	Fine sandy loam, sandy loam, loamy fine sand, loamy sand	SM, SC-SM	A-2-4, A-4	0	0	90-100	85-100	45-85	15-55	9-20	NP-2
	9-30	Sandy clay, clay loam, clay	ML, SM	A-4	0	0	90-100	85-100	70-100	40-95	20-42	5-9
	30-67	Clay loam, sandy clay, clay	ML	A-6, A-7, A-4	0	0	90-100	85-100	70-100	40-95	31-45	5-11
15B:												
Georgeville-----	0-4	Silt loam	ML, SC-SM, CL-ML, CL	A-4	0	0-2	90-100	80-100	72-100	56-90	15-30	1-10
	4-8	Silty clay loam, clay loam	CL	A-6, A-7-6	0	0-2	90-100	80-100	72-100	56-95	30-45	11-18
	8-51	Silty clay, clay, silty clay loam, clay loam	CL, CH	A-6, A-7-6	0	0	95-100	92-100	83-100	64-95	30-60	11-30
	51-75	Silty clay loam, loam, silt loam, fine sandy loam	CL, CL-ML, ML, SM, SC-SM, SC	A-6, A-7-6, A-2-6, A-4	0	0-2	90-100	85-100	60-100	34-95	7-45	1-18
15C:												
Georgeville-----	0-4	Silt loam	ML, SC-SM, CL-ML, CL	A-4	0	0-2	90-100	80-100	72-100	56-90	15-30	1-10
	4-8	Silty clay loam, clay loam	CL	A-7-6, A-6	0	0-2	90-100	80-100	72-100	56-95	30-45	11-18
	8-51	Silty clay, clay, silty clay loam, clay loam	CH, CL	A-7-6, A-6	0	0	95-100	92-100	83-100	64-95	30-60	11-30
	51-75	Silty clay loam, loam, silt loam, fine sandy loam	SC-SM, CL, CL-ML, SM, ML, SC	A-7-6, A-4, A-6, A-2-6	0	0-2	90-100	85-100	60-100	34-95	7-45	1-18
15D:												
Georgeville-----	0-4	Silt loam	CL-ML, CL, SC-SM, ML	A-4	0	0-2	90-100	80-100	72-100	56-90	15-30	1-10
	4-8	Silty clay loam, clay loam	CL	A-6, A-7-6	0	0-2	90-100	80-100	72-100	56-95	30-45	11-18
	8-51	Silty clay, clay, silty clay loam, clay loam	CH, CL	A-6, A-7-6	0	0	95-100	92-100	83-100	64-95	30-60	11-30
	51-75	Silty clay loam, loam, silt loam, fine sandy loam	SM, SC, SC-SM, CL, ML, CL-ML	A-4, A-2-6, A-7-6, A-6	0	0-2	90-100	85-100	60-100	34-95	7-45	1-18

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
16B:												
Helena----------	0-7	Loam, sandy loam	CL-ML, CL, SC-SM	A-2-4, A-4	0	0	90-100	80-100	48-95	24-75	17-39	2-17
	7-16	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0	90-100	80-100	64-100	28-80	31-46	13-25
	16-55	Clay, clay loam	CL, CH	A-7-6	0	0	90-100	80-100	72-100	56-95	44-69	24-44
	55-72	Sandy clay loam, clay loam, loam, fine sandy loam, sandy loam	SC-SM, SC, CL	A-7-6, A-2-4, A-4, A-6	0	0	90-100	80-100	48-100	24-80	26-50	10-29
16C:												
Helena----------	0-7	Loam, sandy loam	CL, SC-SM, CL-ML	A-2-4, A-4	0	0	90-100	80-100	48-95	24-75	17-39	2-17
	7-16	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0	90-100	80-100	64-100	28-80	31-46	13-25
	16-55	Clay, clay loam	CH, CL	A-7-6	0	0	90-100	80-100	72-100	56-95	44-69	24-44
	55-72	Sandy clay loam, clay loam, loam, fine sandy loam, sandy loam	SC-SM, CL, SC	A-6, A-4, A-2-4, A-7-6	0	0	90-100	80-100	48-100	24-80	26-50	10-29
17A:												
Myatt-----------	0-12	Loam, sandy loam, fine sandy loam, silt loam, loamy sand	CL, CL-ML	A-4, A-6	0	0	97-100	95-100	50-100	15-90	17-43	2-17
	12-52	Sandy clay loam, sandy loam, fine sandy loam, loam, clay loam	CL, SC	A-6	0	0	97-100	95-100	55-100	30-80	27-45	12-25
	52-80	Sandy loam, sandy clay loam, fine sandy loam, clay loam, gravelly sandy loam, stratified sand to clay	CL, CL-ML, SC, SC-SM	A-7-6, A-6, A-4, A-2-4	0	0	75-95	65-92	30-90	3-85	0-53	NP-32
18B:												
Nansemond-------	0-12	Sandy loam, loamy sand, loamy fine sand, fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	99-100	92-100	45-85	15-55	0-30	NP-10
	12-52	Sandy loam, fine sandy loam, loam, sandy clay loam, gravelly sandy loam	SC-SM, CL-ML	A-1, A-4, A-2-4	0	0	90-100	50-100	30-95	15-75	20-33	6-15
	52-70	Sandy loam, fine sandy loam, sandy clay loam, sand, fine sand, loamy sand, loamy fine sand, gravelly sandy loam	CL-ML, SM, SC-SM, ML	A-2-4, A-4, A-1	0	0	90-100	50-100	25-90	2-55	0-36	NP-17

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
19A:												
Nawney----------	0-10	Loam, fine sandy loam, silt loam, sandy loam	CL	A-6, A-7-6	0	0	100	100	60-100	30-90	25-45	6-18
	10-44	Loam, fine sandy loam, sandy loam, sandy clay loam, clay loam, silty clay loam	CL, ML, SC, SM	A-6, A-4, A-7-6, A-2-4	0	0	100	100	30-100	29-95	27-51	10-25
	44-70	Loamy sand, stratified sand to clay	SC-SM, SW-SM, CL, ML, SC, SM	A-7-6, A-6, A-4, A-2-6	0	0	100	100	50-100	5-95	0-60	NP-36
Mattan----------	0-14	Muck, mucky silt loam, mucky loam, mucky silty clay loam, mucky clay loam	PT	A-8	0	0	100	100	100	100	0-95	---
	14-40	Muck	PT	A-8	0	0	100	100	100	100	0-77	---
	40-48	Loamy sand, sandy clay loam, stratified loamy sand to silty clay loam, mucky loamy sand	ML, SM	A-4, A-6, A-2-4	0	0	100	100	80-95	15-85	27-74	2-23
	48-60	Sandy clay loam, loamy sand, stratified loamy sand to silty clay loam, mucky sandy clay loam	ML, SM	A-6, A-4, A-2-4	0	0	100	100	80-95	15-85	27-74	2-23
20D:												
Nevarc----------	0-4	Loam, silt loam, sandy loam, fine sandy loam, very fine sandy loam	CL, CL-ML, SC, SC-SM	A-4	0	0	90-100	80-100	50-100	25-90	20-33	4-12
	4-50	Clay loam, sandy clay loam, sandy clay, silty clay loam, silty clay	CL, SC, CH	A-2-7, A-7-6	0	0	90-100	80-100	65-100	30-95	42-63	23-40
	50-74	Fine sandy loam, stratified gravelly sand to clay	CL, CL-ML, SC, SC-SM, SW	A-2-6, A-7-6, A-1, A-2-4, A-4, A-6	0	0-3	65-100	50-100	25-95	2-60	0-57	NP-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Emporia---------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	CL-ML, SM, SC-SM	A-2-4, A-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-14	Loamy fine sand, fine sandy loam, sandy loam, loamy sand, gravelly fine sandy loam, loam	CL-ML, SM, SC-SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	14-18	Fine sandy loam, sandy loam, loam, gravelly fine sandy loam	SC, CL, SC-SM	A-2-4, A-6	0	0-3	85-100	70-100	40-95	20-75	24-36	9-17
	18-41	Sandy clay loam, clay loam, sandy loam, loam, gravelly sandy clay loam, fine sandy loam	SC-SM, CL, SC	A-7-6, A-6	0	0-3	85-100	70-100	40-100	20-80	27-44	12-25
	41-54	Sandy clay, clay, clay loam, sandy clay loam, loam, coarse sandy loam, sandy loam, gravelly sandy clay	CL-ML, SC-SM, CL, SC	A-7-6, A-6, A-2-4	0	0-3	85-100	70-100	45-100	20-95	20-53	6-32
	54-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	CL, ML, SC-SM, CL-ML	A-6, A-4, A-2-4	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
20F:												
Nevarc----------	0-4	Loam, silt loam, sandy loam, fine sandy loam, very fine sandy loam	CL-ML, SC, SC-SM, CL	A-4	0	0	90-100	80-100	50-100	25-90	20-33	4-12
	4-50	Clay loam, sandy clay loam, sandy clay, silty clay loam, silty clay	SC, CH, CL	A-2-7, A-7-6	0	0	90-100	80-100	65-100	30-95	42-63	23-40
	50-74	Fine sandy loam, stratified gravelly sand to clay	SC, SC-SM, CL, SW, CL-ML	A-1, A-7-6, A-2-6, A-2-4, A-4, A-6	0	0-3	65-100	50-100	25-95	2-60	0-57	NP-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Emporia---------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	SC-SM, SM, CL-ML	A-2-4, A-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-14	Loamy fine sand, fine sandy loam, sandy loam, loamy sand, loam, gravelly fine sandy loam	SM, CL-ML, SC-SM	A-2-4, A-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	14-18	Fine sandy loam, sandy loam, loam, gravelly fine sandy loam	SC, CL, SC-SM	A-6, A-2-4	0	0-3	85-100	70-100	40-95	20-75	24-36	9-17
	18-41	Sandy clay loam, clay loam, sandy loam, loam, gravelly sandy clay loam, fine sandy loam	SC-SM, SC, CL	A-6, A-7-6	0	0-3	85-100	70-100	40-100	20-80	27-44	12-25
	41-54	Sandy clay, clay, clay loam, sandy clay loam, loam, sandy loam, coarse sandy loam, gravelly sandy clay	SC, CL, SC-SM, CL-ML	A-2-4, A-6, A-7-6	0	0-3	85-100	70-100	45-100	20-95	20-53	6-32
	54-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	CL-ML, ML, CL, SC-SM	A-6, A-4, A-2-4	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
21B:												
Ocilla----------	0-30	Loamy sand, loamy fine sand, sand, fine sand	SM, SC-SM	A-2-4	0	0	100	95-100	48-85	5-45	0-28	NP-7
	30-50	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-4, A-2-4	0	0	100	95-100	57-90	28-55	24-36	9-17
	50-65	Sandy loam, sandy clay loam, sandy clay, clay	CL, SC-SM	A-7-6, A-4, A-2-4	0	0	100	95-100	57-100	28-95	16-52	2-32
22A:												
Roanoke---------	0-9	Loam, fine sandy loam, silt loam	SC-SM, CL, SC, CL-ML	A-4, A-6	0	0	90-100	80-100	56-100	32-90	21-41	6-19
	9-50	Clay, silty clay, clay loam, silty clay loam	CL, CH	A-7-6	0	0	90-100	80-100	72-100	56-95	43-67	25-44
	50-72	Clay loam, stratified very gravelly sand to clay	CH, GC-GM, CL, SC-SM, SC, CL-ML	A-6, A-4, A-7-6, A-2-4, A-1	0	0	75-100	35-100	18-100	2-95	16-59	2-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
23B:												
Rumford---------	0-11	Loamy sand, loamy fine sand, sandy loam, fine sandy loam	SM, SC-SM	A-1, A-2-4	0	0	82-100	80-100	40-85	12-55	0-26	NP-7
	11-46	Fine sandy loam, sandy loam, sandy clay loam	SC-SM, SC, CL, CL-ML	A-6, A-4, A-2-4, A-1	0	0	84-100	80-100	48-90	24-55	18-36	4-17
	46-70	Sand, loamy sand, sandy loam, fine sandy loam, very gravelly sand	SP, SM	A-4, A-1-b, A-2-4	0	0-3	55-100	35-100	18-85	2-55	0-29	NP-12
Uchee-----------	0-34	Loamy fine sand, loamy sand, sand	SM, SC-SM	A-2-4, A-4	0	0	84-100	80-100	40-85	4-45	0-29	NP-6
	34-72	Sandy clay loam, sandy clay, clay	CH, CL, SC	A-6, A-7-6	0	0	84-100	80-100	64-100	28-95	31-59	13-36
24A:												
Seabrook--------	0-8	Sand, loamy sand, loamy fine sand, fine sand	SC-SM, SM	A-4, A-1-b, A-2-4	0	0	95-100	85-100	42-85	4-45	0-28	NP-7
	8-32	Loamy fine sand, loamy sand, fine sand, sand	SC-SM, SP-SM, SM	A-1-b, A-2-4, A-4	0	0	95-100	85-100	42-85	4-45	0-25	NP-7
	32-60	Fine sand, sand, loamy fine sand, loamy sand	SC-SM, SP-SM, SM	A-2-4, A-3, A-1-b	0	0	95-100	85-100	42-85	4-45	0-24	NP-7
25A:												
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	SC-SM, CL-ML	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	CL, SC, SC-SM	A-6, A-2	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	CL, CL-ML, SC, SC-SM	A-7-6, A-4, A-6	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36
25B:												
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	CL-ML, SC-SM	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	SC-SM, CL, SC	A-2, A-6	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	SC, CL-ML, CL, SC-SM	A-4, A-7-6, A-6	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
26A:												
State-----------	0-10	Fine sandy loam, sandy loam, loam, loamy sand	SC, CL, CL-ML, SC-SM	A-4, A-2-4	0	0	98-100	96-100	48-95	14-75	17-31	2-10
	10-56	Sandy clay loam, clay loam, loam, sandy loam	SC, CL	A-6	0	0	98-100	96-100	57-100	28-80	27-43	12-24
	56-84	Sandy loam, loamy sand, sand, gravelly sand	SC-SM, SC, SP-SM	A-1-b, A-2-4, A-3, A-4	0	0	85-100	62-100	30-75	3-40	0-27	NP-10
27B:												
Tarboro---------	0-8	Loamy sand, loamy fine sand, sand	SM, SP-SM, SW-SM, SC-SM	A-2-4, A-3, A-1	0	0	100	100	50-85	5-45	0-26	NP-7
	8-84	Sand, loamy fine sand, loamy sand, gravelly sand	SW-SM, SP-SM, SP, SM, SC-SM	A-3, A-2-4, A-1	0	0	90-100	70-100	35-85	4-45	0-20	NP-4
28A:												
Tomotley--------	0-12	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-2-4, A-4	0	0	97-100	92-100	57-95	28-75	18-43	2-13
	12-48	Sandy clay loam, clay loam, fine sandy loam, sandy loam, loam	SC, CL, SC-SM	A-6	0	0	97-100	92-100	57-100	28-80	28-45	12-25
	48-60	Sandy loam, clay loam, fine sandy loam, sandy clay loam, loam	CL, SC, SC-SM	A-4, A-6, A-2-4	0	0	97-100	92-100	57-100	28-80	24-49	9-28
	60-84	Loamy coarse sand, coarse sand, sand, clay	SC, SM, SC-SM, CL-ML, CL	A-6, A-2-4, A-3, A-4, A-1-b, A-7-6	0	0	100	100	50-100	5-95	0-52	NP-32
29B:												
Uchee-----------	0-34	Loamy fine sand, loamy sand, sand	SM, SC-SM	A-2-4, A-4	0	0	84-100	80-100	40-85	4-45	0-29	NP-6
	34-72	Sandy clay loam, sandy clay, clay	CH, CL, SC	A-7-6, A-6	0	0	84-100	80-100	64-100	28-95	31-59	13-36
30C:												
Uchee-----------	0-34	Loamy fine sand, loamy sand, sand	SM, SC-SM	A-2-4, A-4	0	0	84-100	80-100	40-85	4-45	0-29	NP-6
	34-72	Sandy clay loam, sandy clay, clay	SC, CH, CL	A-7-6, A-6	0	0	84-100	80-100	64-100	28-95	31-59	13-36

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Slagle----------	0-8	Fine sandy loam, sandy loam, loam, silt loam, loamy sand	CL-ML, SC-SM	A-4	0	0-2	95-100	92-100	45-100	15-90	21-35	6-13
	8-41	Sandy clay loam, sandy loam, loam, fine sandy loam, clay loam	SC, CL, SC-SM	A-2, A-6	0	0-2	95-100	92-100	55-100	28-80	27-44	12-25
	41-70	Sandy loam, clay, loamy sand	CL, CL-ML, SC, SC-SM	A-4, A-6, A-7-6	0	0-3	85-100	80-100	40-100	12-95	16-58	2-36
31:												
Udorthents------	0-6	Fine sandy loam, sandy loam, loamy fine sand, loamy sand, loam, gravelly fine sandy loam	SM, CL-ML, SC-SM	A-4, A-2-4	0	0-3	85-100	70-100	35-95	10-75	19-33	3-12
	6-72	Stratified sandy loam to sandy clay loam, sandy loam, gravelly sandy loam	CL, ML, SC-SM, CL-ML	A-2-4, A-4, A-6	0	0-5	60-100	50-100	30-90	15-55	18-44	3-25
32A:												
Warne-----------	0-11	Fine sandy loam, loam, silt loam, sandy loam	SC-SM, CL, SM	A-4, A-2-4	0	0	100	100	60-100	30-90	17-41	2-13
	11-38	Clay, clay loam, silty clay, sandy clay	CL, CH	A-7-6	0	0	100	100	85-100	45-95	43-67	25-44
	38-62	Loamy sand, stratified sand to clay	SC-SM, CL-ML, CL	A-2-4, A-4, A-6, A-7-6, A-1	0	0	100	100	50-100	5-95	0-59	NP-36
33A:												
Yemassee--------	0-15	Fine sandy loam, sandy loam, loamy fine sand, loamy sand	SC-SM, SC	A-4, A-2-4	0	0	100	100	50-85	15-55	21-39	6-13
	15-40	Sandy clay loam, clay loam, fine sandy loam, sandy loam	SC-SM, SC, CL	A-6, A-7	0	0	100	100	60-100	30-80	27-47	12-24
	40-60	Sandy loam, sandy clay loam, clay loam	CL-ML, CL, SC-SM, SC	A-2-4, A-6, A-4	0	0	100	100	60-100	30-80	22-49	7-28

Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
1A, 1B:														
Altavista------------	0-11	20-80	5-75	10-24	1.30-1.50	14.00-42.00	0.12-0.20	0.0-2.9	0.5-3.0	.28	.28	5	3	86
	11-38	22-75	5-45	18-35	1.30-1.50	4.00-14.00	0.10-0.18	0.0-2.9	0.0-0.5	.28	.28			
	38-72	50-98	1-25	2-35	1.35-1.60	4.00-142.00	0.04-0.16	0.0-2.9	0.0-0.2	.15	.15			
2B, 2C:														
Appling--------------	0-11	50-80	5-45	5-20	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.2-2.0	.24	.24	4	3	86
	11-33	15-70	5-30	33-60	1.25-1.45	4.00-14.00	0.15-0.17	0.0-2.9	0.0-0.5	.24	.20			
	33-43	25-75	5-30	20-40	1.25-1.45	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.2	.15	.15			
	43-72	30-80	5-30	5-30	1.40-1.50	4.00-42.00	0.11-0.16	0.0-2.9	0.0-0.2	.24	.24			
3A:														
Augusta--------------	0-11	30-82	5-45	5-20	1.40-1.70	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	4	2	134
	11-46	25-75	5-48	20-35	1.35-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.15	.15			
	46-84	52-98	1-35	2-20	1.35-1.70	14.00-141.00	0.04-0.15	0.0-2.9	0.0-0.2	.10	.10			
4A:														
Bibb-----------------	0-16	20-95	10-75	2-20	1.50-1.70	4.00-14.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	16-40	20-80	8-75	5-27	1.45-1.75	4.00-14.00	0.10-0.22	0.0-2.9	0.5-1.0	.10	.10			
	40-70	20-98	1-75	2-27	1.45-1.75	4.00-141.00	0.03-0.22	0.0-2.9	0.5-3.0	.02	.05			
Chastain-------------	0-3	10-50	30-75	15-27	1.20-1.40	1.40-4.00	0.12-0.18	3.0-5.9	1.0-6.0	.24	.24	4	5	56
	3-49	5-45	25-65	35-60	1.30-1.50	0.42-1.40	0.12-0.16	3.0-5.9	1.0-3.0	.24	.24			
	49-84	5-75	5-65	25-60	1.35-1.55	0.42-1.40	0.10-0.16	3.0-5.9	0.5-3.0	.20	.20			
5A:														
Bojac----------------	0-13	30-88	1-35	3-8	1.20-1.50	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10	4	2	134
	13-48	30-78	5-35	11-22	1.35-1.55	14.00-42.00	0.08-0.16	0.0-2.9	0.0-0.5	.20	.24			
	48-66	72-99	0-25	1-8	1.30-1.50	42.00-141.00	0.02-0.07	0.0-2.9	0.0-0.2	.05	.10			
6A:														
Buncombe-------------	0-7	72-98	2-20	3-12	1.60-1.75	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	7-58	72-98	2-20	3-12	1.60-1.75	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10			
	58-82	35-99	1-40	1-15	1.50-1.75	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.2	.05	.10			
7A:														
Chastain-------------	0-3	10-50	30-75	15-27	1.20-1.40	1.40-4.00	0.12-0.18	3.0-5.9	1.0-6.0	.24	.24	4	5	56
	3-49	5-45	25-65	35-60	1.30-1.50	0.42-1.40	0.12-0.16	3.0-5.9	1.0-3.0	.24	.24			
	49-84	5-75	5-65	25-60	1.35-1.55	0.42-1.40	0.10-0.16	3.0-5.9	0.5-3.0	.20	.20			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
8A:														
Chewacla	0-6	10-75	10-75	10-35	1.30-1.60	4.00-14.00	0.15-0.24	0.0-2.9	1.0-4.0	.28	.28	5	5	56
	6-32	10-75	10-75	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	0.5-2.0	.32	.32			
	32-84	10-75	10-75	18-35	1.30-1.50	4.00-14.00	0.15-0.24	0.0-2.9	0.5-2.0	.32	.32			
9A, 9B:														
Craven	0-6	10-80	5-70	7-27	1.40-1.60	14.11-42.34	0.14-0.16	0.0-2.9	0.5-2.0	.32	.32	5	5	56
	6-54	5-45	5-65	35-60	1.35-1.55	0.42-4.23	0.11-0.15	3.0-5.9	0.0-0.5	.20	.20			
	54-64	20-90	2-50	5-35	1.45-1.65	0.42-4.23	0.10-0.15	3.0-5.9	0.0-0.5	.15	.15			
10C3:														
Craven	0-4	20-45	15-45	27-40	1.40-1.60	1.41-4.23	0.12-0.14	3.0-5.9	0.5-2.0	.24	.24	5	6	48
	4-23	5-45	5-65	35-60	1.35-1.55	0.42-4.23	0.11-0.15	3.0-5.9	0.0-0.5	.20	.20			
	23-70	5-75	5-65	30-60	1.35-1.55	0.42-4.23	0.11-0.15	3.0-5.9	0.0-0.5	.24	.24			
11A, 11B:														
Dogue	0-10	10-80	5-75	7-25	1.40-1.55	4.00-14.00	0.14-0.19	0.0-2.9	0.5-2.0	.28	.28	5	5	56
	10-21	10-75	5-45	27-60	1.35-1.55	1.40-4.00	0.11-0.15	3.0-5.9	0.0-0.5	.24	.24			
	21-45	10-75	5-45	32-60	1.35-1.55	1.40-4.00	0.11-0.15	3.0-5.9	0.0-0.5	.20	.20			
	45-60	45-95	2-25	2-35	1.35-1.70	1.40-42.00	0.04-0.15	3.0-5.9	0.0-0.5	.15	.15			
12A, 12B, 12C:														
Emporia	0-6	25-90	2-45	7-18	1.30-1.60	4.00-42.00	0.05-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-14	25-90	2-45	7-18	1.30-1.60	14.00-42.00	0.05-0.10	0.0-2.9	0.5-2.0	.28	.28			
	14-18	25-80	5-45	15-25	1.40-1.60	4.00-14.00	0.09-0.15	0.0-2.9	0.0-0.5	.32	.32			
	18-41	20-80	2-45	18-35	1.40-1.60	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	41-54	10-80	2-40	10-45	1.40-1.60	1.40-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.10	.10			
	54-72	45-80	2-35	7-35	1.30-1.60	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24			
Slagle	0-8	15-90	2-75	10-20	1.25-1.50	14.00-42.00	0.12-0.22	0.0-2.9	0.5-2.0	.28	.28	5	5	56
	8-41	20-80	2-50	18-35	1.40-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.15	.15			
	41-70	10-88	2-45	5-50	1.35-1.60	0.42-4.00	0.12-0.18	0.0-4.0	0.0-0.5	.24	.24			
13A, 13B, 13C:														
Eulonia	0-7	50-88	0-75	5-20	1.40-1.60	14.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	7-31	10-60	5-45	35-55	1.50-1.65	1.40-4.00	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20			
	31-45	25-75	5-45	20-45	1.50-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15			
	45-75	25-98	5-45	3-45	1.50-1.70	4.00-42.00	0.04-0.14	0.0-2.9	0.0-0.2	.24	.24			
14B, 14C:														
Faceville	0-9	50-88	1-35	5-20	1.40-1.65	42.00-141.00	0.06-0.09	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	9-30	35-60	5-30	20-50	1.35-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.5	.10	.10			
	30-67	35-60	5-30	30-55	1.25-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.2	.24	.24			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
15B, 15C, 15D:														
Georgeville----------	0-4	5-40	50-80	10-25	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.5	.43	.43	4	5	56
	4-8	5-40	30-70	28-40	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.2	.37	.37			
	8-51	3-30	30-60	34-65	1.20-1.40	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.2	.17	.17			
	51-75	5-60	25-75	15-40	1.25-1.45	4.00-14.00	0.05-0.10	0.0-2.9	0.0-0.1	.37	.37			
16B, 16C:														
Helena---------------	0-7	30-80	5-45	5-25	1.58-1.62	14.00-42.00	0.10-0.12	0.0-2.9	0.5-2.0	.28	.28	4	5	56
	7-16	25-70	5-40	20-35	1.46-1.56	1.40-4.00	0.12-0.15	3.0-5.9	0.0-0.5	.15	.15			
	16-55	15-40	5-40	34-60	1.44-1.55	0.42-1.40	0.13-0.15	6.0-8.9	0.0-0.2	.20	.20			
	55-72	25-80	5-45	15-40	1.46-1.56	1.40-4.00	0.11-0.15	3.0-5.9	0.0-0.2	.15	.15			
17A:														
Myatt----------------	0-12	10-85	5-75	5-25	1.30-1.60	4.00-14.00	0.16-0.24	0.0-2.9	0.5-4.0	.28	.28	5	5	56
	12-52	22-80	20-45	18-35	1.30-1.50	1.40-14.00	0.12-0.20	0.0-2.9	0.0-1.0	.15	.15			
	52-80	25-90	5-50	2-45	1.35-1.55	1.40-42.00	0.05-0.20	0.0-2.9	0.0-0.5	.20	.24			
18B:														
Nansemond------------	0-12	50-88	5-45	2-15	1.40-1.60	14.00-42.00	0.12-0.14	0.0-2.5	0.5-2.0	.20	.20	5	2	134
	12-52	30-85	2-45	10-22	1.50-1.65	14.00-42.00	0.07-0.16	0.0-2.5	0.0-0.5	.05	.24			
	52-70	45-98	0-45	2-25	1.50-1.65	14.00-42.00	0.03-0.16	0.0-2.5	0.0-0.5	.05	.24			
19A:														
Nawney---------------	0-10	5-80	5-75	10-27	1.20-1.35	4.00-14.00	0.14-0.22	0.0-2.9	2.0-4.0	.28	.28	5	8	0
	10-44	5-80	5-70	15-35	1.25-1.50	4.00-14.00	0.10-0.22	3.0-5.9	0.5-3.0	.28	.28			
	44-70	5-98	0-40	2-50	1.25-1.50	4.00-14.00	0.10-0.22	3.0-5.9	0.0-1.0	.10	.10			
Mattan---------------	0-14	0-50	15-90	0-35	0.20-0.80	4.00-14.00	0.22-0.40	0.0-2.9	20-55	.02	.02	5	8	0
	14-40	0-10	1-95	0-10	0.20-0.80	4.00-14.00	0.22-0.40	0.0-2.9	20-55	.02	.02			
	40-48	5-90	2-70	5-35	1.20-1.50	4.00-42.00	0.05-0.18	0.0-2.9	5.0-15	.17	.17			
	48-60	5-90	2-70	5-35	1.20-1.50	4.00-42.00	0.05-0.18	0.0-2.9	5.0-15	.17	.17			
20D, 20F:														
Nevarc---------------	0-4	5-80	5-75	8-18	1.30-1.55	14.00-42.00	0.14-0.19	0.0-2.9	0.5-2.0	.32	.32	5	3	86
	4-50	5-75	15-65	33-55	1.25-1.55	0.42-1.40	0.09-0.15	3.0-5.9	0.0-0.5	.24	.24			
	50-74	10-98	0-45	2-50	1.50-1.70	4.00-42.00	0.04-0.16	0.0-2.9	0.0-0.5	.32	.32			
Emporia--------------	0-6	25-90	2-45	7-18	1.30-1.60	4.00-42.00	0.05-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-14	25-90	2-45	7-18	1.30-1.60	14.00-42.00	0.05-0.10	0.0-2.9	0.5-2.0	.28	.28			
	14-18	25-80	5-45	15-25	1.40-1.60	4.00-14.00	0.09-0.15	0.0-2.9	0.0-0.5	.32	.32			
	18-41	20-80	2-45	18-35	1.40-1.60	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	41-54	10-80	2-40	10-45	1.40-1.60	1.40-14.00	0.08-0.15	0.0-2.9	0.0-0.5	.10	.10			
	54-72	45-80	2-35	7-35	1.30-1.60	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
21B:														
Ocilla----------------	0-30	75-99	0-25	3-12	1.55-1.70	42.00-141.00	0.08-0.11	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	30-50	50-80	5-30	15-25	1.55-1.70	4.00-42.00	0.12-0.14	0.0-2.9	0.0-0.5	.24	.24			
	50-65	30-85	5-45	5-45	1.55-1.80	4.00-42.00	0.06-0.16	0.0-2.9	0.0-0.2	.24	.24			
22A:														
Roanoke---------------	0-9	5-75	10-80	10-27	1.20-1.50	4.00-14.00	0.14-0.20	0.0-2.9	0.5-2.0	.28	.28	4	5	56
	9-50	5-40	30-60	35-60	1.35-1.65	0.42-1.40	0.10-0.19	3.0-5.9	0.0-0.5	.20	.20			
	50-72	5-95	1-75	5-50	1.20-1.50	0.01-141.00	0.04-0.14	1.0-5.9	0.0-0.5	.24	.24			
23B:														
Rumford---------------	0-11	45-90	0-45	2-12	1.25-1.45	42.00-141.00	0.06-0.10	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	11-46	45-85	2-25	8-25	1.45-1.60	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.32	.32			
	46-70	45-99	0-45	2-18	1.50-1.70	14.00-141.00	0.04-0.10	0.0-1.9	0.0-0.5	.10	.10			
Uchee-----------------	0-34	70-99	0-25	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.2-3.0	.24	.24	5	2	134
	34-72	15-75	2-35	20-50	1.40-1.60	1.40-4.00	0.10-0.16	3.0-5.9	0.0-0.5	.15	.15			
24A:														
Seabrook--------------	0-8	72-99	0-28	2-12	1.25-1.55	42.00-141.00	0.05-0.11	0.0-2.9	0.5-2.0	.10	.10	5	2	220
	8-32	72-99	0-28	2-12	1.30-1.60	42.00-141.00	0.02-0.09	0.0-2.9	0.0-0.5	.28	.28			
	32-60	72-99	0-28	2-12	1.30-1.60	42.00-141.00	0.02-0.09	0.0-2.9	0.0-0.2	.20	.20			
25A, 25B:														
Slagle----------------	0-8	15-90	2-75	10-20	1.25-1.50	14.00-42.00	0.12-0.22	0.0-2.9	0.5-2.0	.28	.28	5	5	56
	8-41	20-80	2-50	18-35	1.40-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.15	.15			
	41-70	10-88	2-45	5-50	1.35-1.60	0.42-4.00	0.12-0.18	0.0-4.0	0.0-0.5	.24	.24			
26A:														
State-----------------	0-10	30-88	5-45	5-15	1.25-1.40	4.00-42.00	0.08-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	10-56	25-75	5-45	18-34	1.35-1.50	4.00-14.00	0.14-0.19	0.0-2.9	0.0-0.5	.28	.28			
	56-84	50-98	1-40	2-15	1.35-1.50	14.00-141.00	0.02-0.10	0.0-2.9	0.0-0.2	.17	.17			
27B:														
Tarboro---------------	0-8	72-99	0-18	3-12	1.55-1.70	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	8-84	72-99	0-18	2-7	1.60-1.75	141.00- 141.00	0.02-0.06	0.0-2.9	0.0-0.2	.10	.10			
28A:														
Tomotley--------------	0-12	30-80	5-45	5-20	1.30-1.60	14.00-42.00	0.10-0.15	0.0-2.9	1.0-6.0	.20	.20	5	3	86
	12-48	25-80	5-45	18-35	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-1.0	.15	.15			
	48-60	25-80	5-45	15-40	1.30-1.60	1.40-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.24	.24			
	60-84	20-99	1-50	2-45	1.30-1.60	1.40-141.00	0.02-0.15	0.0-2.9	0.0-0.2	.10	.10			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
29B:														
Uchee----------------	0-34	70-99	0-25	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.2-3.0	.24	.24	5	2	134
	34-72	15-75	2-35	20-50	1.40-1.60	1.40-4.00	0.10-0.16	3.0-5.9	0.0-0.5	.15	.15			
30C:														
Uchee----------------	0-34	70-99	0-25	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.2-3.0	.24	.24	5	2	134
	34-72	15-75	2-35	20-50	1.40-1.60	1.40-4.00	0.10-0.16	3.0-5.9	0.0-0.5	.15	.15			
Slagle---------------	0-8	15-90	2-75	10-20	1.25-1.50	14.00-42.00	0.12-0.22	0.0-2.9	0.5-2.0	.28	.28	5	5	56
	8-41	20-80	2-50	18-35	1.40-1.60	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.15	.15			
	41-70	10-88	2-45	5-50	1.35-1.60	0.42-4.00	0.12-0.18	0.0-4.0	0.0-0.5	.24	.24			
31:														
Udorthents-----------	0-6	25-90	2-45	7-18	1.30-1.60	4.00-42.00	0.05-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	56
	6-72	45-80	2-35	7-35	1.30-1.60	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24			
32A:														
Warne----------------	0-11	20-80	5-75	5-20	1.30-1.60	4.00-14.00	0.10-0.20	0.0-2.9	0.5-5.0	.24	.24	5	5	56
	11-38	5-50	10-55	35-60	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.20	.20			
	38-62	15-99	0-35	2-50	1.40-1.60	0.42-141.00	0.02-0.16	0.0-5.9	0.0-0.5	.10	.10			
33A:														
Yemassee-------------	0-15	55-88	1-30	10-20	1.30-1.60	14.00-42.00	0.10-0.15	0.0-2.9	0.5-4.0	.24	.24	5	3	86
	15-40	30-80	5-30	18-35	1.30-1.50	4.00-14.00	0.11-0.18	0.0-2.9	0.0-2.0	.15	.15			
	40-60	25-80	5-35	12-40	1.30-1.50	4.00-14.00	0.11-0.17	0.0-2.9	0.0-0.5	.24	.24			

Chemical Soil Properties

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
1A, 1B:					
Altavista------------	0-11	3.6-13	2.7-9.6	4.0-7.0	0
	11-38	4.5-9.9	3.4-7.4	4.0-6.5	0
	38-72	0.5-9.3	0.4-7.0	4.0-6.0	0
2B, 2C:					
Appling--------------	0-11	1.1-6.5	0.8-4.9	4.5-5.5	0
	11-33	3.3-7.1	2.5-5.3	4.5-5.5	0
	33-43	2.0-4.5	1.5-3.3	4.5-5.5	0
	43-72	0.5-3.5	0.4-2.6	4.5-5.5	0
3A:					
Augusta--------------	0-11	2.4-9.5	1.8-7.1	4.5-6.0	0
	11-46	5.0-9.9	3.8-7.4	4.5-6.0	0
	46-84	0.5-5.6	0.4-4.2	4.5-6.0	0
4A:					
Bibb-----------------	0-16	2.8-12	2.1-8.8	4.5-5.5	0
	16-40	2.4-9.0	1.8-6.8	4.5-5.5	0
	40-70	1.6-14	1.2-10	4.5-5.5	0
Chastain-------------	0-3	6.0-20	4.5-15	4.0-6.0	0
	3-49	11-22	8.2-16	4.0-6.0	0
	49-84	7.4-22	5.5-16	4.0-6.0	0
5A:					
Bojac----------------	0-13	1.9-4.2	1.4-3.1	4.0-6.5	0
	13-48	2.0-6.6	2.1-5.0	4.0-6.5	0
	48-66	0.2-2.6	0.2-1.9	4.5-6.0	0
6A:					
Buncombe-------------	0-7	1.9-5.2	1.4-3.9	4.5-6.5	0
	7-58	0.8-4.1	0.6-3.1	4.5-6.5	0
	58-82	0.2-4.3	0.2-3.2	4.5-6.5	0
7A:					
Chastain-------------	0-3	6.0-20	4.5-15	4.0-6.0	0
	3-49	11-22	8.2-16	4.0-6.0	0
	49-84	7.4-22	5.5-16	4.0-6.0	0
8A:					
Chewacla-------------	0-6	4.8-18	3.6-13	4.5-6.5	0
	6-32	5.6-13	4.2-9.9	4.5-6.5	0
	32-84	5.6-13	4.2-9.9	4.5-8.4	0
9A, 9B:					
Craven---------------	0-6	2.9-11	2.2-8.4	4.0-6.0	0
	6-54	8.8-16	6.6-12	4.0-5.5	0
	54-64	1.2-9.9	0.9-7.4	4.0-5.5	0
10C3:					
Craven---------------	0-4	7.9-14	5.9-11	4.0-5.5	0
	4-23	8.8-16	6.6-12	4.0-5.5	0
	23-70	8.8-16	6.6-12	4.0-5.5	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
11A, 11B:					
Dogue----------------	0-10	2.9-11	2.2-8.1	4.0-6.0	0
	10-21	6.8-16	5.1-12	4.0-6.0	0
	21-45	8.0-16	6.0-12	4.0-6.0	0
	45-60	0.5-9.9	0.4-7.4	4.0-5.5	0
12A, 12B, 12C:					
Emporia--------------	0-6	2.9-9.0	2.2-6.8	4.5-6.0	0
	6-14	2.9-9.0	2.2-6.8	4.5-6.0	0
	14-18	3.8-7.4	2.8-5.5	4.5-6.0	0
	18-41	4.5-9.9	3.4-7.4	4.5-6.0	0
	41-54	2.5-12	1.9-9.3	4.5-6.0	0
	54-72	1.8-9.9	1.3-7.4	4.5-6.0	0
Slagle---------------	0-8	3.6-9.5	2.7-7.1	4.0-6.0	0
	8-41	2.5-6.1	1.9-4.6	4.0-6.0	0
	41-70	1.2-13	0.9-9.2	4.0-5.5	0
13A, 13B, 13C:					
Eulonia--------------	0-7	2.4-9.5	1.8-7.1	4.5-6.0	0
	7-31	8.8-15	6.6-11	4.5-6.0	0
	31-45	5.0-12	3.8-9.3	4.5-6.0	0
	45-75	0.8-12	0.6-8.9	4.5-6.0	0
14B, 14C:					
Faceville------------	0-9	1.6-6.5	1.2-4.9	4.5-5.5	0
	9-30	2.0-6.1	1.5-4.6	4.5-5.5	0
	30-67	3.5-6.6	2.6-5.0	4.5-5.5	0
15B, 15C, 15D:					
Georgeville----------	0-4	1.0-3.6	0.8-2.7	4.5-6.0	0
	4-8	2.8-4.6	2.1-3.4	4.5-5.5	0
	8-51	3.4-7.0	2.5-5.2	4.5-5.5	0
	51-75	1.5-4.2	1.1-3.2	4.5-5.5	0
16B, 16C:					
Helena---------------	0-7	2.4-11	1.8-8.1	4.5-6.0	0
	7-16	5.0-9.9	3.8-7.4	4.5-5.5	0
	16-55	8.5-16	6.4-12	4.5-5.5	0
	55-72	3.8-10	2.8-7.8	4.5-5.5	0
17A:					
Myatt----------------	0-12	2.4-15	1.8-11	4.5-6.0	0
	12-52	4.5-11	3.4-8.2	4.0-5.5	0
	52-80	0.5-12	0.4-9.3	4.0-5.5	0
18B:					
Nansemond------------	0-12	1.6-8.2	1.2-6.2	3.5-6.0	0
	12-52	2.5-5.6	1.9-4.2	3.5-6.0	0
	52-70	1.5-6.5	1.1-4.8	3.5-6.0	0
19A:					
Nawney---------------	0-10	7.0-16	5.2-12	4.0-5.5	0
	10-44	4.9-16	3.7-12	4.0-5.5	0
	44-70	0.5-17	0.4-12	4.0-6.5	0
Mattan---------------	0-14	45-159	34-119	3.5-6.0	2.0-4.0
	14-40	45-150	34-112	3.5-6.0	0.0-2.0
	40-48	15-46	12-34	3.5-6.0	0.0-2.0
	48-60	15-46	12-34	3.5-6.0	0.0-2.0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
20D, 20F:					
Nevarc---------------	0-4	3.1-9.0	2.3-6.8	4.0-6.0	0
	4-50	8.8-15	6.6-11	4.0-6.0	0
	50-74	2.5-12	1.9-9.6	4.0-6.0	0
Emporia--------------	0-6	2.9-9.0	2.2-6.8	4.5-6.0	0
	6-14	2.9-9.0	2.2-6.8	4.5-6.0	0
	14-18	3.8-7.4	2.8-5.5	4.5-6.0	0
	18-41	4.5-9.9	3.4-7.4	4.5-6.0	0
	41-54	2.5-12	1.9-9.3	4.5-6.0	0
	54-72	1.8-9.9	1.3-7.4	4.5-6.0	0
21B:					
Ocilla---------------	0-30	1.9-7.5	1.4-5.6	4.5-5.5	0
	30-50	3.8-7.4	2.8-5.5	4.5-5.5	0
	50-65	1.2-12	0.9-5.9	4.5-5.5	0
22A:					
Roanoke--------------	0-9	3.6-11	2.7-8.4	4.0-5.5	0
	9-50	8.8-16	6.6-12	4.0-5.5	0
	50-72	1.2-14	0.9-10	4.0-6.5	0
23B:					
Rumford--------------	0-11	1.6-5.2	1.2-3.9	3.6-6.5	0
	11-46	2.0-7.4	1.5-5.5	3.6-7.3	0
	46-70	0.5-5.6	0.4-4.2	3.6-6.5	0
Uchee----------------	0-34	1.3-9.2	1.0-5.0	4.5-5.5	0
	34-72	5.0-14	3.8-10	4.5-5.5	0
24A:					
Seabrook-------------	0-8	1.6-7.5	1.2-5.6	4.0-6.5	0
	8-32	0.5-4.1	0.4-3.1	4.0-6.5	0
	32-60	0.5-3.6	0.4-2.7	4.0-6.5	0
25A, 25B:					
Slagle---------------	0-8	3.6-9.5	2.7-7.1	4.0-6.0	0
	8-41	2.5-6.1	1.9-4.6	4.0-6.0	0
	41-70	1.2-13	0.9-9.2	4.0-5.5	0
26A:					
State----------------	0-10	2.4-8.2	1.8-6.2	4.0-7.3	0
	10-56	4.5-9.6	3.4-7.2	4.0-5.5	0
	56-84	0.5-4.3	0.4-3.2	4.0-6.5	0
27B:					
Tarboro--------------	0-8	1.9-5.2	1.4-3.9	5.1-6.5	0
	8-84	0.5-2.3	0.4-1.7	5.1-6.5	0
28A:					
Tomotley-------------	0-12	3.5-18	2.6-14	4.0-5.5	0
	12-48	5.6-11	4.2-8.2	4.0-5.5	0
	48-60	3.8-11	2.8-8.3	4.0-6.0	0
	60-84	0.5-12	0.4-8.9	4.0-6.0	0
29B:					
Uchee----------------	0-34	1.3-9.2	1.0-5.0	4.5-5.5	0
	34-72	5.0-14	3.8-10	4.5-5.5	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
30C:					
Uchee	0-34	1.3-9.2	1.0-5.0	4.5-5.5	0
	34-72	5.0-14	3.8-10	4.5-5.5	0
Slagle	0-8	3.6-9.5	2.7-7.1	4.0-6.0	0
	8-41	2.5-6.1	1.9-4.6	4.0-6.0	0
	41-70	1.2-13	0.9-9.2	4.0-5.5	0
31:					
Udorthents	0-6	2.9-9.0	2.2-6.8	4.5-6.0	0
	6-72	1.8-9.9	1.3-7.4	4.5-6.0	0
32A:					
Warne	0-11	2.9-18	2.2-14	4.5-6.0	0
	11-38	12-22	9.2-17	3.5-5.5	0
	38-62	1.2-20	0.7-17	3.5-5.5	0
33A:					
Yemassee	0-15	3.6-14	2.7-10	4.0-6.5	0
	15-40	4.5-13	3.4-9.9	4.0-5.5	0
	40-60	3.0-11	2.2-8.3	4.0-5.5	0

Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
1A, 1B:										
Altavista	B	Low								
			Dec.-Apr.	1.5-2.5	>6.0	---	---	None	Brief	Rare
2B, 2C:										
Appling	B	Medium								
			Jan.-Dec.	---	---	---	---	None	---	None
3A:										
Augusta	C	Very high								
			Dec.-Apr.	1.0-2.0	>6.0	---	---	None	Brief	Rare
			May	1.0-2.0	>6.0	---	---	None	---	---
4A:										
Bibb	D	Very high								
			Nov.-June	0.0-1.0	>6.0	---	---	None	Brief	Frequent
Chastain	D	Very high								
			Nov.-May	0.0-1.0	>6.0	---	---	None	Very long	Frequent
			June	---	---	---	---	None	Very long	Frequent
5A:										
Bojac	B	Very low								
			Dec.-Apr.	4.0-6.6	>6.0	---	---	None	Brief	Rare
			November	4.0-6.6	>6.0	---	---	None	---	---
6A:										
Buncombe	A	Very low								
			Jan.-June	---	---	---	---	None	Very brief	Occasional
7A:										
Chastain	D	Very high								
			Nov.-May	0.0-1.0	>6.0	---	---	None	Very long	Frequent
			June	---	---	---	---	None	Very long	Frequent
8A:										
Chewacla	C	Very high								
			Nov.-Apr.	0.5-2.0	>6.0	---	---	None	Long	Occasional

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
9A, 9B:										
Craven	C	Low								
			Oct.-Mar.	2.0-3.0	>6.0	---	---	None	---	None
			April	3.0-4.0	>6.0	---	---	None	---	None
			May	4.0-6.6	>6.0	---	---	None	---	None
			June-Sep.	---	---	---	---	None	---	None
10C3:										
Craven	C	Medium								
			Oct.-Mar.	2.0-3.0	>6.0	---	---	None	---	None
			April	3.0-4.0	>6.0	---	---	None	---	None
			May	4.0-6.6	>6.0	---	---	None	---	None
			June-Sep.	---	---	---	---	None	---	None
11A, 11B:										
Dogue	C	Low								
			Jan.-Mar.	1.5-3.0	>6.0	---	---	None	---	None
			Apr.-Dec.	---	---	---	---	None	---	None
12A, 12B, 12C:										
Emporia	C	Low								
			Nov.-Apr.	3.0-4.5	4.0-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
Slagle	C	Low								
			Nov.-Apr.	1.5-3.0	2.5-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
13A, 13B, 13C:										
Eulonia	C	Low								
			Dec.-Apr.	1.5-3.5	>6.0	---	---	None	---	None
			May	3.0-4.0	>6.0	---	---	None	---	None
			June	4.0-6.6	>6.0	---	---	None	---	None
			July-Sep.	---	---	---	---	None	---	None
			October	4.0-6.6	>6.0	---	---	None	---	None
			November	3.0-4.0	>6.0	---	---	None	---	None
14B, 14C:										
Faceville	B	Low								
			Jan.-Dec.	---	---	---	---	None	---	None
15B, 15C:										
Georgeville	B	Medium								
			Jan.-Dec.	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
15D:										
Georgeville----------------	B	High								
			Jan.-Dec.	---	---	---	---	None	---	None
16B, 16C:										
Helena---------------------	C	Medium								
			Jan.-Apr.	1.5-2.5	1.8-6.6	---	---	None	---	None
			May-Dec.	---	---	---	---	None	---	None
17A:										
Myatt----------------------	D	Very high								
			Nov.-Apr.	0.0-1.0	>6.0	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
18B:										
Nansemond------------------	C	Very low								
			Dec.-Apr.	1.5-2.5	>6.0	---	---	None	---	None
			May-Nov.	---	---	---	---	None	---	None
19A:										
Nawney---------------------	D	Negligible								
			Oct.June	0.0-0.5	>6.0	0.0-2.0	Very long	Frequent	Very long	Frequent
			July-Sep.	0.0-0.5	>6.0	0.0-2.0	Brief	Rare	Very long	Frequent
Mattan---------------------	D	Negligible								
			Jan.-Dec.	0.0	>6.0	0.0-2.0	Very long	Frequent	Very long	Frequent
20D:										
Nevarc---------------------	C	Medium								
			Dec.-Apr.	1.5-3.0	2.5-6.6	---	---	None	---	None
			May-Nov.	---	---	---	---	None	---	None
Emporia--------------------	B	Medium								
			Nov.-Apr.	3.0-4.5	4.0-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
20F:										
Nevarc---------------------	C	High								
			Dec.-Apr.	1.5-3.0	2.5-6.6	---	---	None	---	None
			May-Nov.	---	---	---	---	None	---	None
Emporia--------------------	B	High								
			Nov.-Apr.	3.0-4.5	4.0-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
21B:										
Ocilla	B	Low								
			Dec.-Mar.	1.0-2.5	>6.0	---	---	None	---	None
			Apr.-Nov.	---	---	---	---	None	---	None
22A:										
Roanoke	D	Very high								
			Nov.-May	0.0-1.0	>6.0	---	---	None	Long	Frequent
23B:										
Rumford	B	Very low								
			Jan.-Dec.	---	---	---	---	None	---	None
Uchee	A	Low								
			Jan.-Apr.	3.5-5.0	4.5-6.6	---	---	None	---	None
			May-Dec.	---	---	---	---	None	---	None
24A:										
Seabrook	C	Very low								
			Dec.-Mar.	2.0-3.5	>6.0	---	---	None	---	None
			Apr.-Nov.	---	---	---	---	None	---	None
25A, 25B:										
Slagle	C	Low								
			Nov.-Apr.	1.5-3.0	2.5-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
26A:										
State	B	Low								
			Dec.-June	4.0-6.6	>6.0	---	---	None	---	Rare
			July-Nov.	---	---	---	---	None	---	Rare
27B:										
Tarboro	A	Very low								
			Jan.-Dec.	---	---	---	---	None	---	Rare

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
28A:										
Tomotley------------------	B/D	Very high								
			Dec.-Feb.	0.0-1.0	>6.0	---	---	None	---	Rare
			March	0.5-1.5	>6.0	---	---	None	---	Rare
			April	1.0-2.7	>6.0	---	---	None	---	Rare
			May	1.5-4.0	>6.0	---	---	None	---	Rare
			June	4.0-5.0	>6.0	---	---	None	---	Rare
			July-Sep.	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	0.5-1.5	>6.0	---	---	None	---	Rare
29B:										
Uchee---------------------	A	Low								
			Jan.- Apr.	3.5-5.0	4.5-6.6	---	---	None	---	None
			May-Dec.	---	---	---	---	None	---	None
30C:										
Uchee---------------------	A	Medium								
			Jan.-Apr.	3.5-5.0	4.5-6.6	---	---	None	---	None
			May-Dec.	---	---	---	---	None	---	None
Slagle--------------------	C	Medium								
			Nov.-Apr.	1.5-3.0	2.5-6.6	---	---	None	---	None
			May-Oct.	---	---	---	---	None	---	None
31:										
Udorthents----------------	B	---								
			Oct.-Mar.	2.0-3.0	>6.0	---	---	None	---	None
			April	3.0-4.0	>6.0	---	---	None	---	None
			May	4.0-6.6	>6.0	---	---	None	---	None
			June-Sep.	---	---	---	---	None	---	None
32A:										
Warne---------------------	D	Very high								
			Dec.-Mar.	0.5-1.5	>6.0	---	---	None	---	Rare
			Apr.-Nov.	---	---	---	---	None	---	Rare
33A:										
Yemassee------------------	C	Very high								
			Dec.-Apr.	1.0-1.5	>6.0	---	---	None	---	None
			May	1.5-6.6	>6.0	---	---	None	---	None
			June-Oct.	---	---	---	---	None	---	None
			November	1.5-6.6	>6.0	---	---	None	---	None

Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Subsidence		Potential for frost action	Risk of corrosion	
	Initial	Total		Uncoated steel	Concrete
	In	In			
1A, 1B:					
Altavista	0	---	None	Moderate	Moderate
2B, 2C:					
Appling	0	---	None	Moderate	Moderate
3A:					
Augusta	0	---	None	High	Moderate
4A:					
Bibb	0	---	None	High	Moderate
Chastain	0	---	None	High	High
5A:					
Bojac	0	---	None	Low	High
6A:					
Buncombe	0	---	None	Low	Moderate
7A:					
Chastain	0	---	None	High	High
8A:					
Chewacla	0	---	None	High	Moderate
9A, 9B:					
Craven	0	---	None	High	High
10C3:					
Craven	0	---	None	High	High
11A, 11B:					
Dogue	0	---	None	High	High
12A, 12B:					
Emporia	0	---	None	Moderate	High
Slagle	0	---	None	High	High
12C:					
Emporia	0	---	None	Moderate	High
Slagle	0	---	None	Moderate	High
13A, 13B, 13C:					
Eulonia	0	---	None	Moderate	High
14B, 14C:					
Faceville	0	---	None	Low	Moderate
15B, 15C, 15D:					
Georgeville	0	---	None	High	High
16B, 16C:					
Helena	0	---	None	High	High

Soil Features—Continued

Map symbol and soil name	Subsidence		Potential for frost action	Risk of corrosion	
	Initial	Total		Uncoated steel	Concrete
	In	In			
17A:					
Myatt------------------	0	---	None	High	High
18B:					
Nansemond--------------	0	---	None	Moderate	High
19A:					
Nawney-----------------	0	---	None	High	High
Mattan-----------------	0-4	0-8	None	High	High
20D, 20F:					
Nevarc-----------------	0	---	None	High	High
Emporia----------------	0	---	None	Low	Moderate
21B:					
Ocilla-----------------	0	---	None	Moderate	High
22A:					
Roanoke----------------	0	---	None	High	High
23B:					
Rumford----------------	0	---	None	Low	Moderate
Uchee------------------	0	---	None	Low	High
24A:					
Seabrook---------------	0	---	None	Low	Moderate
25A, 25B:					
Slagle-----------------	0	---	None	High	High
26A:					
State------------------	0	---	None	Moderate	High
27B:					
Tarboro----------------	0	---	None	Low	Moderate
28A:					
Tomotley---------------	0	---	None	High	High
29B:					
Uchee------------------	0	---	None	Low	High
30C:					
Uchee------------------	0	---	None	Low	High
Slagle-----------------	0	---	None	High	High
31:					
Udorthents-------------	0	---	None	---	---
32A:					
Warne------------------	0	---	None	High	High
33A:					
Yemassee---------------	0	---	None	High	High

Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Altavista	Fine-loamy, mixed, semiactive, thermic Aquic Hapludults
Appling	Fine, kaolinitic, thermic Typic Kanhapludults
Augusta	Fine-loamy, mixed, semiactive, thermic Aeric Endoaquults
Bibb	Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents
Bojac	Coarse-loamy, mixed, semiactive, thermic Typic Hapludults
Buncombe	Mixed, thermic Typic Udipsamments
Chastain	Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts
Chewacla	Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts
Craven	Fine, mixed, subactive, thermic Aquic Hapludults
Dogue	Fine, mixed, semiactive, thermic Aquic Hapludults
Emporia	Fine-loamy, siliceous, subactive, thermic Typic Hapludults
Eulonia	Fine, mixed, subactive, thermic Aquic Hapludults
Faceville	Fine, kaolinitic, thermic Typic Kandiudults
Georgeville	Fine, kaolinitic, thermic Typic Kanhapludults
Helena	Fine, mixed, semiactive, thermic Aquic Hapludults
Mattan	Loamy, mixed, euic, thermic Terric Haplosaprists
Myatt	Fine-loamy, siliceous, active, thermic Typic Endoaquults
Nansemond	Coarse-loamy, siliceous, subactive, thermic Aquic Hapludults
Nawney	Fine-loamy, mixed, active, acid, thermic Typic Fluvaquents
Nevarc	Fine, mixed, subactive, thermic Aquic Hapludults
*Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Hapludults
Roanoke	Fine, mixed, semiactive, thermic Typic Endoaquults
Rumford	Coarse-loamy, siliceous, subactive, thermic Typic Hapludults
Seabrook	Mixed, thermic Aquic Udipsamments
Slagle	Fine-loamy, siliceous, subactive, thermic Aquic Hapludults
State	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Tarboro	Mixed, thermic Typic Udipsamments
Tomotley	Fine-loamy, mixed, semiactive, thermic Typic Endoaquults
Uchee	Loamy, kaolinitic, thermic Arenic Kanhapludults
Udorthents	Udorthents
Warne	Fine, mixed, semiactive, thermic Aeric Endoaquults
Yemassee	Fine-loamy, siliceous, semiactive, thermic Aeric Endoaquults

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