United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with the
Alabama Agricultural
Experiment Station and the
Alabama Soil and Water
Conservation District

Soil Survey of Houston County, Alabama

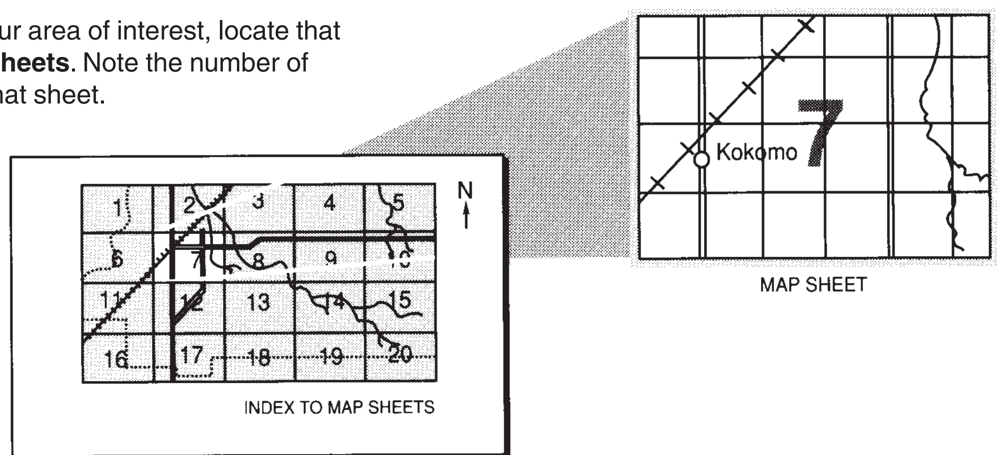
How To Use This Soil Survey

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

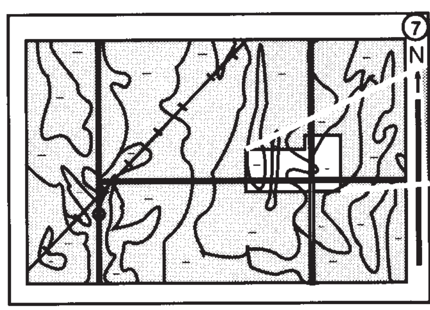
To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

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.



MAP SHEET



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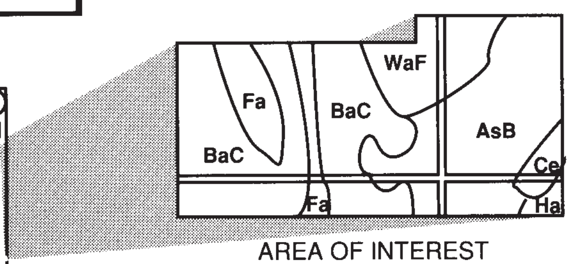

AREA OF INTEREST

NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

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.

Major fieldwork for this soil survey was completed in July, 2002. Soil names and descriptions were approved in July, 2002. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. This survey was made cooperatively by the Natural Resources Conservation Service, the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, the Houston County Commission, the Houston County Chamber of Commerce, the City of Dothan, and the Alabama Department of Agriculture and Industries. It is part of the technical assistance furnished to the Houston County Soil and Water Conservation District.

Cover: Peanuts being harvested in an area of Fuquay loamy sand, 0 to 5 percent slopes. Fuquay soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches. These soils are well suited for peanut seed germination and for ease of harvesting. About 38,000 acres of peanuts were planted in Houston County in 2002. For additional information, see the "Crops and Pasture" section of this survey.

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 2005

Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it 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 survey 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 survey 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 shallow to bedrock. 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. Information on specific uses is given for each soil. 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 Houston County, Alabama

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Fieldwork by John L. Burns, Greg Brannon, and Steve Cleland, Natural Resources Conservation Service

NASIS Database by John L. Burns and Scott Anderson

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, the Houston County Commission, the Houston County Chamber of Commerce, the City of Dothan, and the Alabama Department of Agriculture and Industries

Houston County is in the southeastern part of Alabama (fig. 1). It has a land area of approximately 369,920 acres. The population was 56,574 in 1970 and 89,966 in 2002 (USDC, 2002). Dothan is the county seat. The Chattahoochee River, which flows southward, forms the county's eastern boundary. The Walter F. George Lock and Dam are in Columbia on the Chattahoochee River (fig. 2). The Florida State line is the county's southern boundary. The Little Choctawhatchee River, which flows southwestward into the Choctawhatchee River, forms the county's northwest boundary with Dale County.

The survey area is within Major Land Resource Area (MLRA) 133, which is the Coastal Plain. The source of the parent material for the soils was mainly deposition by marine waters. The elevation in Houston County ranges from about 120 feet above sea level in the southeastern part of the county to about 365 feet above sea level in Dothan. The topography is generally nearly level to gently sloping, but the northern part of the county has scattered strongly sloping areas, mainly along large creeks and the Little Choctawhatchee River.

The county has a well-developed drainage system. Several creeks flow southward into Florida. Omusee Creek flows in a generally northeasterly direction from the vicinity of Dothan. It crosses the northern boundary but bends and reenters the county before emptying into the Chattahoochee River. Several creeks that flow northward to the Little Choctawhatchee River drain the panhandle of Houston County.

The main economic enterprise in the county is agricultural production. Cotton, corn, and peanuts are the principal crops, but small grain, cucumbers, melons, and vegetables are also produced. Much of the cropland is subject to water erosion. Beef cattle, hogs, and dairy cattle are the main livestock enterprises. Rainfall is typically well distributed throughout the year, but in some years it is deficient during the growing season. The average annual rainfall is 56 inches (Harris, 1968).

Early History

Prepared by Gregory R. Brannon, soil data quality specialist, Natural Resources Conservation Service.

Houston County is named in honor of George Smith Houston, who served as governor from 1874 to 1878. Houston is the youngest county in Alabama. It was created on February 9, 1903, from portions of Henry, Dale, and Geneva Counties.

Before the arrival of Europeans, Creek Indians

Figure 1.—Location of Houston County in Alabama.

were the inhabitants of the area. They lived primarily along the rivers and large streams. The Creeks were composed of two major divisions, the Upper Creeks and the Lower Creeks. Houston County was inhabited by the Lower Creeks until they ceded their lands in the treaties of 1814 and 1832.

The early European settlers were mostly from the lower Atlantic States and initially established themselves along the Chattahoochee River. Early occupations included farming, raising livestock, and logging.

The county seat is Dothan, which was known as Poplar Head prior to 1871. Other towns and communities include Ashford, Columbia, Cottonwood, Cowarts, Dupree (fig. 3), Gordon, Kinsey, Newton, Pansey, and Webb (Owen, 1921; Phillips, 1986; Rogers and others, 1994).

Climate

Prepared by the Natural Resources Conservation Service National Water and Climate Center, Portland, Oregon.

The following climate data is from a station in Headland, which is in adjoining Henry County. There are no long term climate stations in Houston County. Thunderstorm days, relative humidity, percent sunshine, and wind information are estimated from the first order station in Tallahassee, Florida.

Table 1 gives data on temperature and precipitation as recorded at Headland in the period 1971 to 2000. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 49.4 degrees F and the average daily minimum temperature is 37.7 degrees. The lowest temperature on record, which occurred at Headland on January 21, 1985, was 0 degrees. In summer, the average temperature is 79.6 degrees and the average daily maximum temperature is 91.3 degrees. The highest temperature, which occurred at Headland on July 21, 2000, was 108 degrees.

Growing degree days are shown in Table 1. 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 average annual total precipitation is about 56.7 inches. Of this, 36.4 inches, or about 64 percent, usually falls in March through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 9.08 inches at Headland on July 6, 1994. Thunderstorms occur on about 82 days each year and are most common between June and August.

The average seasonal snowfall is 0.3 inches. The greatest snow depth at any one time during the period of record was 3 inches recorded on February 10, 1973. On an average, less than 1 day per year has at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 4.0 inches recorded on February 10, 1973.

The average relative humidity in mid-afternoon ranges from about 45 percent in April to about 60 percent in July and August. Humidity is higher at night, and the average at dawn is about 90 percent in most months. The sun shines about 62 percent of the time possible in summer and about 50 percent in winter. The prevailing wind is from the south from

Figure 2.—Walter F. George Lock and Dam on the Chattahoochee River, which forms the eastern border of Houston County. The soils on the flood plains along the river include Annemaine, Kenansville, Kolomoki, and Riverview soils.

February to July and from the northeast in all other months. Average wind speed is highest, about 8 miles per hour, in February and March.

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 parent material. 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.

The soils and miscellaneous areas in the survey area are 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.

Figure 3.—A one-room schoolhouse at Dupree. The soil in this area is Clarendon loamy sand, 0 to 2 percent slopes. In 1968, this soil was classified as a Grangeburg soil. Data collected for the update indicate that the soil contains plinthite, which changes the classification to a Clarendon 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.

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 (Steers and Hajek, 1979).

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, Red Bay sandy loam, 0 to 2 percent slopes, is a phase of the Red Bay series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups (USDA–NRCS, 1996a).

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. Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded, 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, Osier, and Kinston soils, 0 to 1 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. Pits is an example.

Table 4 gives the acreage and proportionate extent of each map unit. For additional data regarding component horizons, see table 16, "Engineering Index Properties;" table 20, "Physical Analyses of Selected Soils;" table 21, "Chemical Analyses of Selected Soils;" and the "Soil Properties" section of this publication. 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 or miscellaneous areas. For a description of a typical soil, including a range in characteristics, see the "Classification of the Soils" section.

AnA—Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Annemaine—smooth and slightly convex slopes; Wahee—slightly concave slopes
Size of areas: 4 to 1,800 acres

Map Unit Composition

Annemaine and similar soils—50 percent
Wahee and similar soils—40 percent
Dissimilar soils—10 percent

Characteristics of the Annemaine Soil

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

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

Subsoil:
9 to 16 inches—yellowish red clay that has red mottles
16 to 37 inches—yellowish red clay that has strong brown and light gray mottles
37 to 49 inches—mottled dark red, strong brown, light gray, and light yellowish brown sandy clay loam

Substratum:
49 to 74 inches—mottled light gray, strong brown, dark red, and light yellowish brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of $1^{1}/_{2}$ to $2^{1}/_{2}$ feet from January through March
Shrink-swell potential: Moderate
Flooding: Rare, January through December
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2w

Characteristics of the Wahee Soil

Typical profile
Surface layer:
0 to 7 inches—dark gray fine sandy loam

Subsurface layer:
7 to 11 inches—pale brown sandy loam that has light brownish gray mottles

Subsoil:
11 to 15 inches—light olive brown clay loam that has yellowish red and light brownish gray mottles
15 to 30 inches—grayish brown clay loam that has reddish yellow and red mottles
30 to 46 inches—gray clay loam that has strong brown and red mottles
46 to 56 inches—gray sandy clay that has brownish yellow and red mottles
56 to 68 inches—light gray sandy clay loam that has brownish yellow and yellowish red mottles
68 to 80 inches—gray sandy loam that has brownish yellow mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of $^{1}/_{2}$ to $1^{1}/_{2}$ feet from December through March
Shrink-swell potential: Moderate

Flooding: Rare, January through December
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3w

Minor Components

Dissimilar soils
• Cahaba and Kolomoki soils, which are well drained and are in the higher positions

Similar soils
• Annemaine and Wahee soils that have a surface layer of loamy fine sand

Land Use

Major uses: Cropland and woodland
Other uses: Some smaller areas are used as pasture and hayland.

ArA—Ardilla fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Size of areas: 4 to 200 acres

Map Unit Composition

Ardilla and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Ardilla Soil

Typical profile
Surface layer:
0 to 4 inches—very dark gray fine sandy loam

Subsurface layer:
4 to 9 inches—dark grayish brown fine sandy loam

Subsoil:
9 to 15 inches—light yellowish brown sandy loam
15 to 30 inches—yellowish brown sandy clay loam that has light gray and strong brown mottles
30 to 60 inches—mottled red, light yellowish brown, strong brown, and light gray sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 1 to 2 feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: Fragipan at a depth of $2^1/_2$ to 5 feet

Interpretive group
Land capability classification: 2w

Minor Components

Dissimilar soils
• Clarendon soils, which are moderately well drained and are in the slightly higher positions
• Pansey soils, which are poorly drained and are in the lower positions

Similar soils
• Ardilla soils that have a surface layer of loamy sand or sandy loam

Land Use

Major uses: Woodland
Other uses: Some smaller areas are used as pasture and hayland.

BnB—Benevolence loamy sand, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 5 to 140 acres

Map Unit Composition

Benevolence and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Benevolence Soil

Typical profile
Surface layer:
0 to 12 inches—brown loamy sand

Subsoil:
12 to 37 inches—yellowish red sandy loam
37 to 47 inches—red sandy loam
47 to 80 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid in the upper part

of the subsoil; moderate in the lower part of the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Fuquay soils, which have a perched water table for short periods and are in the slightly lower positions
• Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils
• A Benevolence soil that has a thicker and darker surface layer

Land Use

Major uses: Cropland
Other uses: Some smaller areas are used as pasture and hayland.

BnD—Benevolence loamy sand, 5 to 15 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 4 to 130 acres

Map Unit Composition

Benevolence and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Benevolence Soil

Typical profile
Surface layer:
0 to 12 inches—brown loamy sand

Subsoil:
12 to 37 inches—yellowish red sandy loam
37 to 47 inches—red sandy loam
47 to 80 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid in the upper part of the subsoil; moderate in the lower part of the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 4e

Minor Components

Dissimilar soils
• Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches thick
• Orangeburg and Red Bay soils, which are in positions similar to those of the Benevolence soil and have more clay in the subsoil
• A soil that has a dark red subsoil and that is in landscape positions similar to those of the Benevolence soil

Similar soils
• A Benevolence soil that has a surface layer of sandy loam

Land Use

Major uses: Woodland
Other uses: Pasture and hayland

BOA—Bibb, Osier, and Kinston soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Bibb and Kinston—smooth and slightly concave slopes; Osier—smooth to convex slopes
Size of areas: 4 to 11,000 acres

Map Unit Composition

The composition of this map unit is variable. Some areas consist mainly of the Bibb soil, some consist mainly of the Osier or Kinston soil, and others contain all three soils in variable proportions. A representative unit is 40 percent Bibb and similar soils, 30 percent Osier and similar soils, 25 percent Kinston and similar soils, and 5 percent dissimilar soils.

Characteristics of the Bibb Soil

Typical profile

Surface layer:
0 to 4 inches—brown sandy loam

Subsurface layer:
4 to 12 inches—mottled dark gray and dark grayish brown sandy loam

Substratum:
12 to 37 inches—gray sandy loam that has strong brown stains
37 to 60 inches—gray silt loam that has thin layers of sandy loam and loamy sand

Soil properties and qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of $^1/_2$ to 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 5w

Characteristics of the Osier Soil

Typical profile

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

Subsurface layer:
3 to 8 inches—mottled dark gray and grayish brown loamy sand

Substratum:
8 to 16 inches—dark gray loamy sand
16 to 36 inches—gray sand that has yellowish brown mottles
36 to 48 inches—light brownish gray sand that has brownish yellow mottles
48 to 60 inches—light gray coarse sand that has yellowish brown and light brownish gray mottles
60 to 75 inches—dark gray coarse sand that has light brownish gray mottles

Soil properties and qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Rapid
Available water capacity: Low
Seasonal high water table: Apparent, at a depth of $^1/_2$ to 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 5w

Characteristics of the Kinston Soil

Typical profile

Surface layer:
0 to 5 inches—dark gray loam

Subsurface layer:
5 to 12 inches—gray loam that has brownish yellow mottles

Subsoil:
12 to 48 inches—gray clay loam that has strong brown and brownish yellow mottles

Substratum:
48 to 60 inches—gray clay loam that has light gray mottles
60 to 72 inches—gray gravelly loamy sand

Soil properties and qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 6w

Minor Components

Dissimilar soils

- Dothan soils, which are well drained and are in the higher upland positions
- Plummer soils, which have a developed subsoil below a depth of 40 inches and are in the slightly higher positions

Similar soils

- Bibb, Osier, and Kinston soils that have a sandy overwash deposition

Land Use

Major uses: Woodland
Other uses: Some small cleared areas are used as pasture.

BuB—Buncombe-Bigbee complex, 0 to 5 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Natural levees on flood plains
Landform position: Smooth to convex slopes
Size of areas: 5 to 210 acres

Map Unit Composition

Buncombe and similar soils—60 percent
Bigbee and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Buncombe Soil

Typical profile
Surface layer:
0 to 10 inches—brown loamy sand

Subsurface layer:
10 to 13 inches—light brown sand

Subsoil:
13 to 16 inches—reddish yellow loamy fine sand
16 to 55 inches—brown sand

Substratum:
55 to 72 inches—reddish brown sandy loam that has strong brown and yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Excessively drained
Permeability class: Rapid
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 5w

Characteristics of the Bigbee Soil

Typical profile
Surface layer:
0 to 8 inches—dark yellowish brown loamy sand

Substratum:
8 to 17 inches—yellowish red loamy sand
17 to 32 inches—yellowish brown sand
32 to 80 inches—pale brown sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Excessively drained
Permeability class: Rapid
Available water capacity: Low
Seasonal high water table: Apparent, at a depth of $3^1/_2$ to 6 feet for brief periods from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3s

Minor Components

Dissimilar soils
• Riverview soils, which have more clay in the subsoil than the Buncombe and Bigbee soils and are in the lower, smooth slope positions

Similar soils
• Bigbee and Buncombe soils that have a surface layer of sand

Land Use

Major uses: Woodland and wildlife
Other uses: Some areas along large creeks and rivers are used for recreation.

CdA—Clarendon loamy sand, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave foot slopes
Size of areas: 4 to 190 acres

Map Unit Composition

Clarendon and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Clarendon Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 15 inches—light yellowish brown loamy sand

Subsoil:
15 to 21 inches—yellowish brown sandy clay loam that has brownish yellow mottles
21 to 40 inches—yellowish brown sandy clay loam that has gray, yellowish red, yellowish brown, and strong brown mottles
40 to 80 inches—mottled gray, yellowish brown, red, and yellowish red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 2 to 3 feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 2w

Minor Components

Dissimilar soils
• Dunbar soils, which are somewhat poorly drained and are in the lower positions
• Fuquay soils, which are well drained, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are in the higher positions
• Grady soils, which are poorly drained, have a clayey subsoil, and are in depressions
• Poorly drained soils that have a sandier subsoil than the Clarendon soil and are in the lower positions

Similar soils
• A Clarendon soil that has a surface layer of loamy fine sand

Land Use

Major uses: Cropland
Other uses: Woodland

CoB—Cowarts fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Convex to smooth side slopes
Size of areas: 5 to 140 acres

Map Unit Composition

Cowarts and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Cowarts Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown fine sandy loam

Subsoil:
8 to 12 inches—yellowish brown fine sandy loam
12 to 19 inches—yellowish brown sandy clay loam
19 to 25 inches—yellowish brown sandy clay loam that has yellowish red and red mottles

Substratum:
25 to 60 inches—mottled red, yellowish brown, and light gray sandy clay loam that has strata of coarser and finer material

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: In places, less than 5 percent, by volume, plinthite

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Dothan soils, which contain more than 5 percent plinthite in the subsoil and are in landscape positions similar to those of the Cowarts soil
• Nankin soils, which have more clay in the subsoil than the Cowarts soil and are in the slightly higher positions

Similar soils
• A Cowarts soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland
Other uses: Woodland

DBA—Dorovan, Byars, and Grady soils, ponded

Map Unit Setting

Landscape: Coastal Plain
Landform: Swamps and depressions
Landform position: Concave to smooth slopes
Size of areas: 5 to 170 acres

Map Unit Composition

The composition of this map unit is variable. Some areas consist mainly of the Dorovan soil, some consist mainly of the Grady or Byars soil, and others contain all three soils in variable proportions. A representative unit is 40 percent Dorovan and similar soils, 35 percent Grady and similar soils, 20 percent Byars and similar soils, and 5 percent dissimilar soils.

Characteristics of the Dorovan Soil

Typical profile
Surface layer:
0 to 3 inches—very dark brown mucky peat

Subsoil:
3 to 74 inches—black muck

Substratum:
74 to 92 inches—very dark grayish brown and dark grayish brown sand
92 to 108 inches—dark grayish brown sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Very poorly drained
Permeability class: Moderate
Available water capacity: Very high
Seasonal high water table: Apparent, at the surface to a depth of $^1/_2$ foot from January through December
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent, January through December
Other distinctive properties: None

Interpretive group
Land capability classification: 7w

Characteristics of the Grady Soil

Typical profile
Surface layer:
0 to 5 inches—very dark gray sandy loam that has light gray mottles

Subsoil:
5 to 11 inches—grayish brown sandy clay loam
11 to 28 inches—gray clay that has yellowish brown and yellowish red mottles
28 to 62 inches—gray clay that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth 1 foot from December through May
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent, December through May
Other distinctive properties: None

Interpretive group
Land capability classification: 5w

Characteristics of the Byars Soil

Typical profile
Surface layer:
0 to 13 inches—black sandy loam

Subsoil:
13 to 21 inches—dark gray clay loam that has strong brown mottles
21 to 43 inches—gray clay that has yellowish brown and strong brown mottles
43 to 65 inches—mottled dark gray and gray clay loam that has yellowish brown and strong brown mottles
65 to 73 inches—mottled dark gray and yellowish brown gray clay
73 to 80 inches—gray clay loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Very poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December through May
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent, December through May
Other distinctive properties: None

Interpretive group
Land capability classification: 6w

Minor Components

Dissimilar soils
• Dunbar soils, which are somewhat poorly drained and are in the slightly higher positions

- Plummer soils, which have sandy surface and subsurface layers and are in the slightly higher positions
- Soils that have a thinner organic layer than that of the Dorovan soils
- Soils that have higher content of organic matter in the surface layer and a higher content of silt in the subsoil than the Grady soil

Similar soils
- A Grady soil that has a surface layer of mucky silt loam

Land Use

Major uses: Woodland and wildlife
Other uses: None

DoA—Dothan loamy sand, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex summits
Size of areas: 5 to 520 acres

Map Unit Composition

Dothan and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Dothan Soil

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

Subsoil:
6 to 13 inches—yellowish brown sandy loam
13 to 28 inches—yellowish brown sandy clay loam
28 to 33 inches—yellowish brown sandy clay loam that has strong brown and yellowish red mottles
33 to 60 inches—mottled yellowish brown, strong brown, red, yellow, and very pale brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to more than 60 inches

Interpretive group
Land capability classification: 1

Minor Components

Dissimilar soils
- Fuquay soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Grady soils, which are poorly drained and are in the lower positions

Similar soils
- A Dothan soil that has a surface layer of sandy loam
- A Dothan soil that has more than 5 percent ironstone nodules on the surface and in the subsoil

Land Use

Major uses: Cropland
Other uses: Woodland and urban development

DoB—Dothan loamy sand, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 5 to 4,500 acres

Map Unit Composition

Dothan and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Dothan Soil

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

Subsoil:
6 to 13 inches—yellowish brown sandy loam
13 to 28 inches—yellowish brown sandy clay loam
28 to 33 inches—yellowish brown sandy clay loam that has strong brown and yellowish red mottles
33 to 60 inches—mottled yellowish brown, strong brown, red, yellow, and very pale brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained

Figure 4.—An area of Dothan loamy sand, 2 to 5 percent slopes. The average yield of nonirrigated cotton lint in areas of this map unit is 900 pounds per acre.

Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Fuquay soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Soils that have less plinthite in the subsoil than the Dothan soil
• Grady soils, which are poorly drained and are in the lower positions

Similar soils
• A Dothan soil that has a surface layer of sandy loam
• A Dothan soil that has more than 5 percent ironstone nodules on the surface and in the subsoil

Land Use

Major uses: Cropland (fig. 4)
Other uses: Woodland and urban development

DoC—Dothan loamy sand, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges; hillslopes
Landform position: Smooth and slightly convex side slopes

Size of areas: 5 to 130 acres

Map Unit Composition

Dothan and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Dothan Soil

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

Subsoil:
6 to 13 inches—yellowish brown sandy loam
13 to 28 inches—yellowish brown sandy clay loam
28 to 33 inches—yellowish brown sandy clay loam that has strong brown and yellowish red mottles
33 to 60 inches—mottled yellowish brown, strong brown, red, yellow, and very pale brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: Moderate
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
- Fuquay soils, which are in the slightly higher positions and have sandy surface and subsurface layers that have a combined thickness of 20 to 40 inches
- Nankin soils, which have more clay in the subsoil than the Dothan soil and are in the slightly higher positions

Similar soils
- A Dothan soil that has a surface layer of sandy loam or sandy clay loam
- A Dothan soil that has 5 percent or more ironstone nodules on the surface and in the subsoil

Land Use

Major uses: Cropland
Other uses: Woodland and urban development

DsA—Dunbar-Goldsboro complex, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Size of areas: 5 to 100 acres

Map Unit Composition

Dunbar and similar soils—60 percent
Goldsboro and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Dunbar Soil

Typical profile
Surface layer:
0 to 8 inches—dark gray sandy loam

Subsoil:
8 to 14 inches—light olive brown clay loam that has dark gray mottles
14 to 20 inches—grayish brown sandy clay that has light olive brown mottles
20 to 62 inches—gray sandy clay that has yellowish brown, brown, and yellowish red mottles

Substratum:
62 to 92 inches—light gray sandy clay that has pockets of sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1 to 2 feet from November through May
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2w

Characteristics of the Goldsboro Soil

Typical profile
Surface layer:
0 to 8 inches—grayish brown loamy sand

Subsurface layer:
8 to 12 inches—pale brown loamy sand

Subsoil:
12 to 15 inches—brownish yellow sandy loam
15 to 25 inches—yellowish brown sandy clay loam
25 to 45 inches—pale brown sandy clay loam that has yellowish brown and gray mottles
45 to 76 inches—gray sandy clay loam that has red and brownish yellow mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of $1^1/_2$ to $2^1/_2$ feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2w

Minor Components

Dissimilar soils
• Grady soils, which are poorly drained and are in the lower positions
• Ocilla soils, which have sandy surface and subsurface layers and are in the slightly higher positions
• Soils that have less clay in the subsoil than the Dunbar soil

Similar soils
• Dunbar and Goldsboro soils that have a surface layer of loam or fine sandy loam

Land Use

Major uses: Pasture and woodland
Other uses: Cropland

FaA—Faceville fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex summits
Size of areas: 5 to 140 acres

Map Unit Composition

Faceville and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Faceville Soil

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

Subsoil:
5 to 11 inches—yellowish red sandy clay loam
11 to 28 inches—yellowish red sandy clay
28 to 34 inches—red sandy clay
34 to 60 inches—red sandy clay that has strong brown and yellowish brown mottles
60 to 72 inches—mottled dark red, yellowish brown, and pale brown sandy clay

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 1

Minor Components

Dissimilar soils
• Nankin soils, which have mottling higher in the subsoil and substratum than the Faceville soil and are in similar positions
• Soils that have a darker red subsoil than that of the Faceville soil

Similar soils
• A Faceville soil that has a surface layer of sandy loam or sandy clay loam

Land Use

Major uses: Cropland
Other uses: Hayland and woodland

FaB—Faceville fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex side slopes
Size of areas: 5 to 760 acres

Map Unit Composition

Faceville and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Faceville Soil

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

Subsoil:
5 to 11 inches—yellowish red sandy clay loam
11 to 28 inches—yellowish red sandy clay
28 to 34 inches—red sandy clay
34 to 60 inches—red sandy clay that has strong brown and yellowish brown mottles
60 to 72 inches—mottled dark red, yellowish brown, and pale brown sandy clay

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Nankin soils, which have mottling higher in the subsoil and substratum than the Faceville soil and are in similar positions
• Soils that have a darker red subsoil than that of the Faceville soil

Similar soils
• A Faceville soil that has a surface layer of sandy loam or sandy clay loam

Land Use

Major uses: Cropland
Other uses: Pasture

FqB—Fuquay loamy sand, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex side slopes
Size of areas: 5 to 500 acres

Map Unit Composition

Fuquay and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Fuquay Soil

Typical profile
Surface layer:
0 to 10 inches—brown loamy sand

Subsurface layer:
10 to 22 inches—light yellowish brown loamy sand that has very pale brown mottles
22 to 34 inches—brownish yellow loamy sand

Subsoil:
34 to 44 inches—yellowish brown sandy loam
44 to 52 inches—mottled yellowish brown, strong brown, and yellowish red sandy loam
52 to 80 inches—mottled yellowish brown, strong brown, red, and light brownish gray sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the upper part of the subsoil
Available water capacity: Low
Seasonal high water table: Perched, at a depth of 4 to 6 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 35 to 60 inches

Interpretive group
Land capability classification: 2s

Minor Components

Dissimilar soils
• Bonifay soils, which are in landscape positions similar to those of the Fuquay soil and have sandy surface and subsurface layers with a combined thickness of 40 to 60 inches
• Dothan soils, which have a thinner sandy surface layer than that of the Fuquay soil and are in the lower positions
• Nankin soils, which do not have sandy surface and subsurface layers, have a clayey subsoil, and are in the lower positions

Figure 5.—Ryegrass growing in an area of Fuquay loamy sandy, 0 to 5 percent slopes. The picture was taken in May. The average yield of cool-season grasses in areas of this map unit is 4.5 Animal Unit Months per acre.

Similar soils

- A Fuquay soil that has surface and subsurface layers of loamy fine sand or sand

Land Use

Major uses: Cropland and hayland (fig. 5)
Other uses: Woodland and urban development

GbA—Grady-Byars complex, depressional

Map Unit Setting

Landscape: Coastal Plain
Landform: Depressions
Landform position: Concave to smooth slopes
Size of areas: 5 to 150 acres

Map Unit Composition

Grady and similar soils—60 percent
Byars and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Grady Soil

Typical profile

Surface layer:
0 to 5 inches—very dark gray sandy loam that has light gray mottles

Subsoil:
5 to 11 inches—grayish brown sandy clay loam
11 to 28 inches—gray clay that has yellowish brown and yellowish red mottles
28 to 62 inches—gray clay that has yellowish brown mottles

Soil properties and qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December through May

Shrink-swell potential: Low
Flooding: None
Ponding: Frequent, December through May
Other distinctive properties: None

Interpretive group
Land capability classification: 5w

Characteristics of the Byars Soil

Typical profile
Surface layer:
0 to 13 inches—black sandy loam

Subsoil:
13 to 21 inches—dark gray clay loam that has strong brown mottles
21 to 43 inches—gray clay that has yellowish brown and strong brown mottles
43 to 65 inches—mottled dark gray and gray clay loam that has yellowish brown and strong brown mottles
65 to 73 inches—mottled dark gray and yellowish brown gray clay
73 to 80 inches—gray clay loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Very poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December through May
Shrink-swell potential: Moderate
Flooding: None
Ponding: Frequent, December through May
Other distinctive properties: Thick, dark surface horizon that has a high content of organic matter

Interpretive group
Land capability classification: 6w

Minor Components

Dissimilar soils
• Dunbar soils, which are somewhat poorly drained and are in the slightly higher positions
• Soils that have a higher content of silt in the subsoil than the Grady soil and are in similar positions

Similar soils
• A Grady soil that has a surface layer of silt loam and is in landscape positions similar to those of the major components

Land Use

Major uses: Woodland and wildlife
Other uses: None

KeA—Kenansville loamy sand, 0 to 2 percent slopes, rarely flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth slopes
Size of areas: 5 to 150 acres

Map Unit Composition

Kenansville and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Kenansville Soil

Typical profile
Surface layer:
0 to 8 inches—grayish brown loamy sand

Subsurface layer:
8 to 24 inches—light yellowish brown loamy sand

Subsoil:
24 to 36 inches—yellowish brown sandy loam
36 to 42 inches—yellowish brown loamy sand

Substratum:
42 to 84 inches—very pale brown sand that has strong brown and light gray mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately rapid
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: Rare, January through December
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2s

Minor Components

Dissimilar soils
• Cahaba and Kolomoki soils, which are in landscape positions similar to those of the Kenansville soil and have a subsoil that has a higher content of clay
• Soils that are in landscape positions similar to those of the Kenansville soil and have sandy surface and subsurface layers with a combined thickness of 40 inches or more

• Soils that are loamy sand or sand throughout

Similar soils
• A Kenansville soil that has a seasonal high water table at a depth of 4 to 6 feet

Land Use

Major uses: Cropland, hayland, and pasture
Other uses: Woodland

KhB—Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Size of areas: 5 to 740 acres

Map Unit Composition

Kolomoki and similar soils—60 percent
Cahaba and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Kolomoki Soil

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

Subsoil:
8 to 28 inches—yellowish red clay
28 to 35 inches—yellowish red sandy clay loam

Substratum:
35 to 42 inches—strong brown sandy loam
42 to 65 inches—strong brown sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: Rare, January through December
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 1

Characteristics of the Cahaba Soil

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

Subsurface layer:
5 to 9 inches—brown and yellowish red sandy loam

Subsoil:
9 to 53 inches—red sandy clay loam

Substratum:
53 to 80 inches—yellowish red sandy loam that has brownish yellow mottles
80 to 90 inches—reddish yellow sandy loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: Rare, January through December
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 1

Minor Components

Dissimilar soils
• Kenansville soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Riverview soils, which have a seasonal high water table at a depth of 3 to 5 feet and are in lower terrace positions
• Wahee soils, which are somewhat poorly drained and are in the lower positions

Similar soils
• A soil that has loamy sand or sand within 40 inches below a loamy subsoil and that is in positions similar to those of the Cahaba soil
• A Kolomoki soil that has 24 to 30 inches of loamy sand and sand deposition

Land Use

Major uses: Cropland, hayland, and pasture
Other uses: Woodland

LcB—Lucy loamy sand, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Smooth and slightly convex side slopes
Size of areas: 5 to 190 acres

Map Unit Composition

Lucy and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Lucy Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 24 inches—strong brown loamy sand

Subsoil:
24 to 35 inches—yellowish red sandy loam
35 to 70 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2s

Minor Components

Dissimilar soils
- Fuquay soils, which have a perched water table and are in the slightly lower positions
- Troup soils, which are in landscape positions similar to those of the Lucy soil and have sandy surface and subsurface layers with a combined thickness of 40 to 60 inches

Similar soils
- A Lucy soil that has a surface layer of sand

Land Use

Major uses: Cropland, hayland, and pasture
Other uses: Woodland and urban development

LcC—Lucy loamy sand, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 5 to 90 acres

Map Unit Composition

Lucy and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Lucy Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 24 inches—strong brown loamy sand

Subsoil:
24 to 35 inches—yellowish red sandy loam
35 to 70 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3s

Minor Components

Dissimilar soils
- Fuquay soils, which have a perched water table and are in the slightly lower positions
- Troup soils, which are in landscape positions similar to those of the Lucy soil and have sandy surface and subsurface layers with a combined thickness of 40 to 60 inches

Similar soils
- A Lucy soil that has a surface layer of sand

Land Use

Major uses: Cropland, hayland, and pasture

Other uses: Woodland and urban development

LtE—Lucy-Troup complex, 8 to 20 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 5 to 400 acres

Map Unit Composition

Lucy and similar soils—60 percent
Troup and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Lucy Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 24 inches—strong brown loamy sand

Subsoil:
24 to 35 inches—yellowish red sandy loam
35 to 70 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Characteristics of the Troup Soil

Typical profile
Surface layer:
0 to 2 inches—very dark grayish brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6s

Minor Components

Dissimilar soils
- Bonifay soils, which have a perched water table and are in landscape positions similar to those of the Lucy and Troup soils
- Cowarts and Springhill soils, which have a loamy subsoil and are in the middle side-slope positions
- Nankin soils, which have a clayey subsoil and are in the upper side-slope positions
- Bibb, Osier, and Kinston soils, which are poorly drained and are on flood plains

Similar soils
- A Lucy soil that has a surface layer of sand
- A Troup soil that has a surface layer of loamy sand or sand

Land Use

Major uses: Woodland
Other uses: Pasture

MIA—Mantachie, Iuka, and Kinston soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth to concave slopes
Size of areas: 4 to 100 acres

Map Unit Composition

The composition of this map unit is variable. Some areas consist mainly of the Mantachie soil, some consist mainly of the Iuka or Kinston soil, and others contain all three soils in variable proportions. A representative unit is 35 percent Mantachie and similar soils, 30 percent Iuka and similar soils, 25 percent Kinston and similar soils, and 10 percent dissimilar soils.

Characteristics of the Mantachie Soil

Typical profile

Surface layer:

0 to 5 inches—dark grayish brown loam that has dark yellowish brown mottles

Subsurface layer:

5 to 11 inches—mottled brown, grayish brown, and light yellowish brown fine sandy loam

Subsoil:

11 to 15 inches—mottled grayish brown, brown, and dark yellowish brown loam

15 to 19 inches—mottled gray and strong brown loam

19 to 61 inches—gray loam that has strong brown and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1 to 1 1/2 feet from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 5w

Characteristics of the Iuka Soil

Typical profile

Surface layer:

0 to 7 inches—brown fine sandy loam

Subsurface layer:

7 to 13 inches—brown fine sandy loam

Substratum:

13 to 22 inches—light yellowish brown fine sandy loam that has strong brown and grayish brown mottles

22 to 60 inches—mottled gray and yellowish brown sandy loam

Soil properties and qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 1 to 3 feet from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 5w

Characteristics of the Kinston Soil

Typical profile

Surface layer:

0 to 5 inches—dark gray loam

Subsurface layer:

5 to 12 inches—gray loam that has brownish yellow mottles

Subsoil:

12 to 48 inches—gray clay loam that has strong brown and brownish yellow mottles

Substratum:

48 to 60 inches—gray clay loam that has brown and light gray mottles

60 to 72 inches—gray gravelly loamy sand

Soil properties and qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group

Land capability classification: 6w

Minor Components

Dissimilar soils

- Dothan soils, which are well drained and are in the higher upland positions
- Goldsboro soils, which have a developed subsoil, are moderately well drained, and are in the slightly higher positions that are not subject to flooding

Similar soils

- Mantachie, Iuka, and Kinston soils that have sandy overwash deposition

Land Use

Major uses: Woodland and wildlife
Other uses: Some areas are used as pasture.

MtA—Meggett fine sandy loam, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Backswamps
Landform position: Concave to smooth slopes
Size of areas: 5 to 170 acres

Map Unit Composition

Meggett and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Meggett Soil

Typical profile
Surface layer:
0 to 5 inches—dark gray fine sandy loam

Subsurface layer:
5 to 8 inches—gray fine sandy loam that has yellowish brown mottles

Subsoil:
8 to 16 inches—gray sandy clay that has strong brown mottles
16 to 43—gray clay that has strong brown mottles
43 to 52—light olive gray clay that has yellowish brown and gray mottles
52 to 65 inches—gray sandy clay that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from November through April
Shrink-swell potential: Moderate
Flooding: Frequent, November through April
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6w

Minor Components

Dissimilar soils
• Soils that are somewhat poorly drained and are in the slightly higher positions
• Soils that are in landscape positions similar to those of the Meggett soil and have less clay in the subsoil

Similar soils
• A Meggett soil that has a surface layer of loam and that is in landscape positions similar to those of the major component

Land Use

Major uses: Woodland and wildlife
Other uses: None

NaB—Nankin sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Convex to smooth side slopes
Size of areas: 4 to 110 acres

Map Unit Composition

Nankin and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65 inches—mottled red, very pale brown, and weak red sandy clay loam that has pockets and thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None

Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
• Dothan soils, which contain plinthite and are in landscape positions similar to those of the Nankin soil
• Cowarts soils, which have less clay in the subsoil and are in the slightly lower positions

Similar soils
• A Nankin soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland
Other uses: Woodland and pasture

NcD—Nankin-Cowarts complex, 5 to 12 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Convex to smooth side slopes
Size of areas: 4 to 270 acres

Map Unit Composition

Nankin and similar soils—60 percent
Cowarts and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65—mottled red, very pale brown, and weak red sandy clay loam that has pockets of thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 4e

Characteristics of the Cowarts Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown fine sandy loam

Subsoil:
8 to 12 inches—yellowish brown fine sandy loam
12 to 19 inches—yellowish brown sandy clay loam
19 to 25 inches—yellowish brown sandy clay loam that has yellowish red and red mottles

Substratum:
25 to 60 inches—mottled red, yellowish brown, and light gray sandy clay loam that has strata of coarser and finer material

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: In places, 0 to 5 percent, by volume, plinthite

Interpretive group
Land capability classification: 4e

Minor Components

Dissimilar soils
• Dothan soils, which have plinthite in the subsoil and are in the lower side-slope positions
• Springhill soils, which are in landscape positions similar to those of the Nankin and Cowarts soils and have a deeper subsoil
• Wicksburg soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

• Bibb, Osier, and Kinston soils, which are poorly drained and are on flood plains

Similar soils
• Nankin and Cowarts soils that have a surface layer of sandy clay loam

Land Use

Major uses: Pasture
Other uses: Woodland and cropland

NpE—Nankin-Lucy-Springhill complex, 12 to 20 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Nankin and Springhill—smooth and slightly convex, upper side slopes; Lucy—smooth and slightly convex, lower side slopes
Size of areas: 4 to 250 acres

Map Unit Composition

Nankin and similar soils—40 percent
Lucy and similar soils—30 percent
Springhill and similar soils—25 percent
Dissimilar soils—5 percent

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65 inches—mottled red, very pale brown, and weak red sandy clay loam that has pockets of thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Characteristics of the Lucy Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 24 inches—strong brown loamy sand

Subsoil:
24 to 35 inches—yellowish red sandy loam
35 to 70 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Characteristics of the Springhill Soil

Typical profile
Surface layer:
0 to 5 inches—brown sandy loam

Subsurface layer:
5 to 11 inches—yellowish red sandy loam

Subsoil:
11 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None

Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Minor Components

Dissimilar soils
- Bonifay soils, which have a perched water table and are in the lower footslope positions
- Cowarts soils, which have loamy subsoil and are in middle side-slope positions
- Bibb, Osier, and Kinston soils, which are poorly drained and are on flood plains

Similar soils
- A Lucy soil that has a surface layer of sand
- Nankin and Springhill soils that are moderately eroded and that have a surface layer of sandy clay loam

Land Use

Major uses: Woodland
Other uses: Pasture

NsE—Nankin-Springhill-Henderson complex, 8 to 20 percent slopes, cobbly

Map Unit Setting

Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 4 to 200 acres

Map Unit Composition

Nankin and similar soils—50 percent
Springhill and similar soils—30 percent
Henderson and similar soils—15 percent
Dissimilar soils—5 percent

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65 inches—mottled red, very pale brown, and weak red sandy clay loam that has pockets of thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: None
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Characteristics of the Springhill Soil

Typical profile
Surface layer:
0 to 5 inches—brown sandy loam

Subsurface layer:
5 to 11 inches—yellowish red sandy loam

Subsoil:
11 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6e

Characteristics of the Henderson Soil

Typical profile
Surface layer:
0 to 4 inches—very dark grayish brown gravelly sandy loam

Subsurface layer:
4 to 13 inches—yellowish brown gravelly sandy clay loam

Subsoil:
13 to 18 inches—strong brown gravelly sandy clay

18 to 49 inches—strong brown gravelly clay that has yellowish red and reddish brown mottles
49 to 65 inches—mottled yellowish brown, light gray, and reddish brown gravelly clay

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: None
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: 15 to 25 percent silicified limestone and ironstone rock fragments in the surface and subsurface layers

Interpretive group
Land capability classification: 6e

Minor Components

Dissimilar soils
- Dothan soils, which are in landscape positions similar to those of the Nankin, Springhill, and Henderson soils and have more than 5 percent plinthite in the subsoil
- Cowarts soils, which are in the slightly lower positions and have less clay in the subsoil than that of the Nankin, Springhill, and Henderson soils
- Scattered areas that are moderately deep to soft bedrock
- Bibb, Osier, and Kinston soils, which are poorly drained and are on flood plains

Similar soils
- Henderson, Nankin, and Springhill soils that are moderately eroded and that have a surface layer of sandy clay loam
- Scattered areas containing a few boulders and cobbles of silicified limestone

Land Use

Major uses: Woodland
Other uses: Pasture

OiA—Ocilla-Albany complex, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Size of areas: 4 to 300 acres

Map Unit Composition

Ocilla and similar soils—60 percent
Albany and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Ocilla Soil

Typical profile
Surface layer:
0 to 4 inches—very dark gray loamy sand

Subsurface layer:
4 to 15 inches—light brownish gray loamy sand
15 to 28 inches—pale brown loamy sand that has brownish yellow mottles

Subsoil:
28 to 49 inches—brownish yellow sandy loam that has light gray mottles
49 to 59 inches—brownish yellow sandy clay loam that has light gray and yellowish red mottles
59 to 67 inches—mottled strong brown and yellowish red sandy clay loam that has light gray mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of 1 to $2^1/_2$ feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3w

Characteristics of the Albany Soil

Typical profile
Surface layer:
0 to 7 inches—dark gray sand

Subsurface layer:
7 to 25 inches—light yellowish brown sand that has yellow mottles
25 to 48 inches—brownish yellow loamy sand that has light gray, yellow, and yellowish brown mottles

Subsoil:
48 to 56 inches—light yellowish brown sandy loam that has strong brown, yellowish brown, and gray mottles
56 to 64 inches—mottled light yellowish brown, light

gray, pale yellow, and yellowish brown sandy clay loam
64 to 70 inches—gray sandy clay loam that has pale yellow, light gray, and red mottles
70 to 88 inches—mottled gray, red, and yellow sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: Apparent, at a depth of 1 to $2^1/_2$ feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3w

Minor Components

Dissimilar soils
• Bonifay and Fuquay soils, which are well drained and are in the higher positions
• Plummer soils, which are poorly drained and are in the lower positions

Similar soils
• A Ocilla soil that has a surface layer of loamy fine sand
• An Albany soil that has a surface layer of loamy sand

Land Use

Major uses: Pasture and woodland
Other uses: Cropland

OrA—Orangeburg sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex summits
Size of areas: 4 to 350 acres

Map Unit Composition

Orangeburg and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Orangeburg Soil

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

Subsurface layer:
7 to 12 inches—strong brown sandy loam

Subsoil:
12 to 54 inches—yellowish red sandy clay loam
54 to 72 inches—yellowish red sandy clay loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 1

Minor Components

Dissimilar soils
• Faceville soils, which are in landscape positions similar to those of the Orangeburg soil and have more clay in the subsoil
• Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Red Bay soils, which are in landscape positions similar to those of the Orangeburg soil and have a dark red subsoil

Similar soils
• An Orangeburg soil that has a surface layer of loamy sand

Land Use

Major uses: Cropland and hayland
Other uses: Pasture and woodland

OrB—Orangeburg sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges

Landform position: Smooth and slightly convex slopes
Size of areas: 4 to 700 acres

Map Unit Composition

Orangeburg and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Orangeburg Soil

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

Subsurface layer:
7 to 12 inches—strong brown sandy loam

Subsoil:
12 to 54 inches—yellowish red sandy clay loam
54 to 72 inches—yellowish red sandy clay loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Orangeburg soil and have less clay in the subsoil
- Faceville soils, which are in landscape positions similar to those of the Orangeburg soil and have more clay in the subsoil
- Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Red Bay soils, which are in landscape positions similar to those of the Orangeburg soil and have a dark red subsoil

Similar soils
- An Orangeburg soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland and hayland
Other uses: Pasture and woodland

OrC—Orangeburg sandy loam, 5 to 8 percent

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 4 to 70 acres

Map Unit Composition

Orangeburg and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Orangeburg Soil

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

Subsurface layer:
7 to 12 inches—strong brown sandy loam

Subsoil:
12 to 54 inches—yellowish red sandy clay loam
54 to 72 inches—yellowish red sandy clay loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Orangeburg soil and have less clay in the subsoil
- Faceville soils, which are in landscape positions similar to those of the Orangeburg soil and have more clay in the subsoil
- Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Red Bay soils, which are in landscape positions

similar to those of the Orangeburg soil and have a dark red subsoil

Similar soils
- An Orangeburg soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland and hayland
Other uses: Pasture and woodland

PaA—Pansey fine sandy loam, depressional

Map Unit Setting

Landscape: Coastal Plain
Landform: Depressions
Landform position: Smooth to concave slopes
Size of areas: 4 to 740 acres

Map Unit Composition

Pansey and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Pansey Soil

Typical profile
Surface layer:
0 to 5 inches—very dark gray fine sandy loam

Subsurface layer:
5 to 10 inches—gray fine sandy loam

Subsoil:
10 to 20 inches—light gray sandy loam that has olive yellow mottles
20 to 35 inches—light gray sandy clay loam that has olive yellow and red mottles
35 to 70 inches—mottled light gray, red, and yellowish brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of $1^1/_2$ feet from December through April
Shrink-swell potential: Low
Flooding: None
Ponding: Occasional, December through April
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 30 to 60 inches

Interpretive group
Land capability classification: 4w

Minor Components

Dissimilar soils
- Ardilla soils, which are somewhat poorly drained and are in the slightly higher positions
- Byars and Grady soils, which are in landscape positions similar to those of the Pansey soil and have more clay in the subsoil
- Plummer soils, which are in landscape positions similar to those of the Pansey soil and have sandy surface and subsurface layers with a combined thickness of 40 inches or more

Similar soils
- A Pansey soil that has a surface layer of loamy sand

Land Use

Major uses: Woodland
Other uses: Some smaller areas are used as pasture, for corn, or both.

PeA—Pansey fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth to concave slopes
Size of areas: 10 to 470 acres

Map Unit Composition

Pansey and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Pansey Soil

Typical profile
Surface layer:
0 to 5 inches—very dark gray fine sandy loam

Subsurface layer:
5 to 10 inches—gray fine sandy loam

Subsoil:
10 to 20 inches—light gray sandy loam that has olive yellow mottles
20 to 35 inches—light gray sandy clay loam that has olive yellow and red mottles
35 to 70 inches—mottled light gray, red, and yellowish brown sandy clay loam

Soil properties and qualities
Depth class: Very deep

Drainage class: Poorly drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of $1^1/_2$ feet from December through April
Shrink-swell potential: Low
Flooding: Occasional, December through April
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 30 to 60 inches

Interpretive group
Land capability classification: 4w

Minor Components

Dissimilar soils
- Dothan soils, which are well drained and are in the higher upland positions
- Ardilla soils, which are somewhat poorly drained and are in the slightly higher positions
- Bibb soils, which are frequently flooded, have less clay in the substratum than that of the Pansey soil, and are in the lower positions
- Plummer soils, which are in landscape positions similar to those of the Pansey soil and have sandy surface and subsurface layers with a combined thickness of 40 inches or more

Similar soils
- A Pansey soil that has a surface layer of loamy sand

Land Use

Major uses: Woodland
Other uses: Some smaller areas are used as pasture.

PmA—Plummer sand, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats and depressions
Landform position: Smooth to concave slopes
Size of areas: 4 to 230 acres

Map Unit Composition

Plummer and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Plummer Soil

Typical profile
Surface layer:
0 to 9 inches—dark gray sand

Subsurface layer:
9 to 28 inches—gray sand
28 to 50 inches—light gray sand

Subsoil:
50 to 72 inches—light gray sandy loam that has yellowish brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December through May
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 4w

Minor Components

Dissimilar soils
- Ardilla soils, which are somewhat poorly drained and are in the slightly higher positions
- Ocilla soils, which are somewhat poorly drained and are in the slightly higher positions
- Pansey soils, which are in landscape positions similar to those of the Plummer soil and have plinthite in the subsoil

Similar soils
- A Plummer soil that has a surface layer of loamy sand

Land Use

Major uses: Woodland
Other uses: Some smaller areas are used as pasture and hayland.

Pt—Pits

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges, side slopes, and terraces
Landform position: Smooth to concave slopes
Size of areas: 4 to 30 acres

Map Unit Composition

Pits, borrow, and similar areas—90 percent
Dissimilar areas—10 percent

Characteristics of the Pits

This map unit consists of open excavations from which the original soil and underlying material have been removed for use at another location. Typically, the remaining material consists of strata of sand, gravel, and mixed earthy materials. No typical pedon has been selected.

Soil properties and qualities
Depth class: Very deep
Drainage class: Variable
Permeability class: Variable
Available water capacity: Low
Seasonal high water table: Variable
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: Discontinuous layers, streaks, and pockets having variable textures

Interpretive group
Land capability classification: 8s

Land Use

Major uses: Source of sand and clay fill material
Other uses: Some areas are reclaimed for use as woodland.

RbA—Red Bay sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex summits
Size of areas: 4 to 150 acres

Map Unit Composition

Red Bay and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Red Bay Soil

Typical profile
Surface layer:
0 to 6 inches—dark reddish brown sandy loam

Subsurface layer:
6 to 20 inches—dark red sandy loam
20 to 72 inches—dark red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 1

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Red Bay soil and have less clay in the subsoil
- Orangeburg soils, which are in landscape positions similar to those of the Red Bay soil and have a lighter red subsoil

Similar soils
- A Red Bay soil that has a surface layer of loamy samd

Land Use

Major uses: Cropland and woodland
Other uses: Some smaller areas are used as pasture and hayland.

RbB—Red Bay sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 4 to 560 acres

Map Unit Composition

Red Bay and similar soils—90 percent
Dissimilar soils—10

Characteristics of the Red Bay Soil

Typical profile
Surface layer:
0 to 6 inches—dark reddish brown sandy loam

Subsurface layer:
6 to 20 inches—dark red sandy loam
20 to 72 inches—dark red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained

Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Red Bay soil and have less clay in the subsoil
- Orangeburg soils, which are in landscape positions similar to those of the Red Bay soil and have a lighter red subsoil

Similar soils
- A Red Bay soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland
Other uses: Some smaller areas are used as pasture and hayland.

RbC—Red Bay sandy loam, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Smooth and slightly convex side slopes
Size of areas: 4 to 130 acres

Map Unit Composition

Red Bay and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Red Bay Soil

Typical profile
Surface layer:
0 to 6 inches—dark reddish brown sandy loam

Subsurface layer:
6 to 20 inches—dark red sandy loam
20 to 72 inches—dark red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Red Bay soil and have less clay in the subsoil
- Orangeburg soils, which are in landscape positions similar to those of the Red Bay soil and have a lighter red subsoil

Similar soils
- A Red Bay soil that has a surface layer of sandy clay loam

Land Use

Major uses: Cropland and hayland
Other uses: Pasture and woodland

RvB—Riverview silt loam, 0 to 5 percent slopes, occasionally flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth slopes
Size of areas: 4 to 160 acres

Map Unit Composition

Riverview and similar soils—85 percent
Dissimilar soils—15 percent

Characteristics of the Riverview Soil

Typical profile
Surface layer:
0 to 6 inches—very dark grayish brown silt loam

Subsoil:
6 to 23 inches—dark yellowish brown loam that has brown mottles

23 to 31 inches—yellowish brown loam that has brown mottles
31 to 39 inches—yellowish brown fine sandy loam that has yellowish red mottles

Substratum:
39 to 70 inches—brownish yellow loamy fine sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 3 to 5 feet from December through March
Shrink-swell potential: Low
Flooding: Occasional, December through March
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2w

Minor Components

Dissimilar soils
• Buncombe soils, which are sandy and are on natural levees
• Kolomoki soils, which have a well developed, clayey subsoil and are in the slightly higher positions
• Meggett soils, which are poorly drained, have more clay in the subsoil than that of the Riverview soil, and are in the lower, backswamp positions

Similar soils
• A Riverview soil that has a substratum of clay

Land Use

Major uses: Cropland and woodland
Other uses: Some smaller areas are used as pasture and hayland.

TnB—Troup-Bonifay complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad, upland flats
Landform position: Troup—smooth and slightly convex slopes; Bonifay—smooth and slightly concave slopes
Size of areas: 4 to 7,100 acres

Map Unit Composition

Troup and similar soils—60 percent
Bonifay and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Troup Soil

Typical profile
Surface layer:
0 to 2 inches—dark grayish brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3s

Characteristics of the Bonifay Soil

Typical profile
Surface layer:
0 to 4 inches—brown loamy sand

Subsurface layer:
4 to 9 inches—yellowish brown loamy sand that has very pale brown mottles
9 to 32 inches—brownish yellow loamy sand that has very pale brown mottles
32 to 50 inches—brownish yellow loamy sand that has very pale brown and strong brown mottles

Subsoil:
50 to 74 inches—light yellowish brown sandy clay loam that has strong brown and red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the upper part of the subsoil
Available water capacity: Low

Figure 6.—Cucumbers growing in an area of Troup-Bonifay complex, 0 to 5 percent slopes. Cucumbers are grown in deep, sandy soils. If they are grown in soils that have a red subsoil, the soil will stain them. Also pictured are bee crates. Bees are necessary for cross-pollination.

Seasonal high water table: Perched, at a depth of 4 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 42 to 60 inches

Interpretive group
Land capability classification: 4s

Minor Components

Dissimilar soils
- Lucy soils, which are in landscape positions similar to those of the Troup and Bonifay soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Grady soils, which are poorly drained and are in depressional areas
- Nankin and Orangeburg soils, which do not have sandy surface and subsurface layers and are in the slightly lower positions
- Wicksburg soils, which are in landscape positions similar to those of the Troup and Bonifay soils and have subsoil with a higher content of clay

Similar soils
- Troup and Bonifay soils with a surface layer of sand

Land Use

Major uses: Cropland (fig. 6)
Other uses: Woodland and urban development

TnC—Troup-Bonifay complex, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Troup—smooth and slightly convex slopes; Bonifay—smooth and slightly concave slopes
Size of areas: 4 to 150 acres

Map Unit Composition

Troup and similar soils—60 percent
Bonifay and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Troup Soil

Typical profile
Surface layer:
0 to 2 inches—dark grayish brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3s

Characteristics of the Bonifay Soil

Typical profile
Surface layer:
0 to 4 inches—brown loamy sand

Subsurface layer:
4 to 9 inches—yellowish brown loamy sand that has very pale brown mottles
9 to 32 inches—brownish yellow loamy sand that has very pale brown mottles
32 to 50 inches—brownish yellow loamy sand that has very pale brown and strong brown mottles

Subsoil:
50 to 74 inches—light yellowish brown sandy clay loam that has strong brown and red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the upper part of the subsoil
Available water capacity: Low
Seasonal high water table: Perched, at a depth of 4 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 42 to 60 inches

Interpretive group
Land capability classification: 4s

Minor Components

Dissimilar soils
- Fuquay soils, which are in the slightly lower positions and have sandy and subsurface layers with a combined thickness of 20 to 40 inches
- Lucy soils, which are in landscape positions similar to those of the Troup and Bonifay soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Nankin soils, which do not have sandy surface and subsurface layers, have a clayey subsoil, and are in the lower positions

Similar soils
- Troup and Bonifay soils that have a surface layer of sand

Land Use

Major uses: Cropland
Other uses: Woodland and urban development

TyB—Troup-Lucy complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 4 to 1,500 acres

Map Unit Composition

Troup and similar soils—60 percent
Lucy and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Troup Soil

Typical profile
Surface layer:
0 to 2 inches—dark grayish brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability class: Rapid in the surface and subsurface layers; moderate in the subsoil
Available water capacity: Low
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None

Other distinctive properties: None

Interpretive group
Land capability classification: 3s

Characteristics of the Lucy Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 24 inches—strong brown loamy sand

Subsoil:
24 to 35 inches—yellowish red sandy loam
35 to 70 inches—red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; moderate the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2s

Minor Components

Dissimilar soils
• Benevolence soils, which are in landscape positions similar to those of the Troup and Lucy soils and have thinner, sandy surface and subsurface layers
• Fuquay soils, which have more than 5 percent, by volume, plinthite in the subsoil, are yellowish brown, and are in the slightly lower positions

Land Use

Major uses: Cropland
Other uses: Woodland and urban development

UbA—Urban land-Bibb-Kinston complex, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth to concave slopes
Size of areas: 5 to 200 acres

Map Unit Composition

Urban land and similar areas—50 percent
Bibb and similar soils—30 percent
Kinston and similar soils—15 percent
Dissimilar soils—5 percent

Characteristics of the Urban Land

Urban land consists of impermeable layers that include cement, asphalt, tarmac, and compacted soil.

Properties and Qualities
Depth class: Not applicable
Drainage class: Not applicable
Permeability class: Impermeable
Available water capacity: Not applicable
Seasonal high water table: Not applicable
Flooding: Controlled by drainage designs
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: Not applicable

Characteristics of the Bibb Soil

Typical profile
Surface layer:
0 to 4 inches—brown sandy loam

Subsurface layer:
4 to 12 inches—mottled dark gray and dark grayish brown sandy loam

Substratum:
12 to 37 inches—gray sandy loam that has strong brown stains
37 to 60 inches—gray silt loam that has thin layers of sandy loam and loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderate
Available water capacity: Moderate
Seasonal high water table: Apparent, at a depth of $^1/_2$ to 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 5w

Characteristics of the Kinston Soil

Typical profile
Surface layer:
0 to 5 inches—dark gray loam

Subsurface layer:
5 to 12 inches—gray loam that has brownish yellow mottles

Subsoil:
12 to 48 inches—gray clay loam that has strong brown and brownish yellow mottles

Substratum:
48 to 60 inches—gray clay loam that has light gray and brown mottles
60 to 72 inches—gray gravelly loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Poorly drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from November through May
Shrink-swell potential: Low
Flooding: Frequent, November through May
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 6w

Minor Components

Dissimilar soils
• Plummer soils, which have a developed subsoil below a depth of 40 inches and are in the slightly higher positions

Similar soils
• Bibb and Kinston soils that have sandy overwash deposition

Land Use

Major uses: Urban development
Other uses: Woodland and wildlife habitat

UcA—Urban land-Clarendon-Ardilla complex, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth to concave foot slopes
Size of areas: 5 to 80 acres

Map Unit Composition

Urban land and similar areas—50 percent
Clarendon and similar soils—25 percent
Ardilla and similar soils—20 percent
Dissimilar soils—5 percent

Characteristics of the Urban Land

Urban land consists of impermeable layers that include cement, asphalt, tarmac, and compacted soil.

Properties and Qualities
Depth class: Not applicable
Drainage class: Not applicable
Permeability class: Impermeable
Available water capacity: Not applicable
Seasonal high water table: Not applicable
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: Not applicable

Characteristics of the Clarendon Soil

Typical profile
Surface layer:
0 to 8 inches—dark grayish brown loamy sand

Subsurface layer:
8 to 15 inches—light yellowish brown loamy sand

Subsoil:
15 to 21 inches—yellowish brown sandy clay loam that has brownish yellow mottles
21 to 40 inches—yellowish brown sandy clay loam that has gray, yellowish red, yellowish brown, and strong brown mottles
40 to 80 inches—mottled gray, yellowish brown, red, and yellowish red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Moderately well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 2 to 3 feet from December through April
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 2w

Characteristics of the Ardilla Soil

Typical profile
Surface layer:
0 to 4 inches—very dark gray fine sandy loam

Subsurface layer:
4 to 9 inches—dark grayish brown fine sandy loam

Subsoil:
9 to 15 inches—light yellowish brown sandy loam
15 to 30 inches—yellowish brown sandy clay loam that has light gray and strong brown mottles
30 to 60 inches—mottled red, yellowish brown, light gray, and strong brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1 to 2 feet from December through April
Flooding: None
Ponding: None
Other distinctive properties: Fragipan at a depth of $2^1/_2$ to 5 feet

Interpretive group
Land capability classification: 2w

Minor Components

Dissimilar soils
• Dothan soils, which are well drained and are in the higher positions
• Pansey soils, which are poorly drained and are in the lower positions

Similar soils
• Clarendon and Ardilla soils that have a surface layer of loamy sand or sandy loam

Land Use

Major uses: Urban development
Other uses: Woodland and wildlife habitat

UdB—Urban land-Dothan complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 7 to 10,800 acres

Map Unit Composition

Urban land and similar areas—50 percent
Dothan and similar soils—40 percent
Dissimilar soils—10 percent

Characteristics of the Urban Land

Urban land consists of impermeable layers that include cement, asphalt, tarmac, and compacted soil.

Properties and Qualities
Depth class: Not applicable
Drainage class: Not applicable
Permeability class: Impermeable
Available water capacity: Not applicable
Seasonal high water table: Not applicable
Shrink-swell potential: Not applicable
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: Not applicable

Characteristics of the Dothan Soil

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

Subsoil:
6 to 13 inches—yellowish brown sandy loam
13 to 28 inches—yellowish brown sandy clay loam
28 to 33 inches—yellowish brown sandy clay loam that has strong brown and yellowish red mottles
33 to 60 inches—mottled yellowish brown, strong brown, red, yellow, and very pale brown sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Clarendon soils, which are moderately well drained and are in the lower positions
• Fuquay soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils
- A Dothan soil that has a surface layer of sandy loam
- Soils that have less than 5 percent plinthite in the subsoil
- A Dothan soil that has more than 5 percent ironstone nodules on the surface and in the subsoil

Land Use

Major uses: Urban development
Other uses: Landscaping and gardening

UrB—Urban land-Red Bay complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 50 to 820 acres

Map Unit Composition

Urban land and similar areas—50 percent
Red Bay and similar soils—40 percent
Dissimilar soils—10 percent

Characteristics of the Urban Land

Urban land consists of impermeable layers that include cement, asphalt, tarmac and compacted soil.

Properties and Qualities
Depth class: Not applicable
Drainage class: Not applicable
Permeability class: Impermeable
Available water capacity: Not applicable
Seasonal high water table: Not applicable
Shrink-swell potential: Not applicable
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: Not applicable

Characteristics of the Red Bay Soil

Typical profile
Surface layer:
0 to 6 inches—dark reddish brown sandy loam

Subsurface layer:
6 to 20 inches—dark red sandy loam
20 to 72 inches—dark red sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
- Benevolence soils, which are in landscape positions similar to those of the Red Bay soil and have less clay in the subsoil
- Orangeburg soils, which are in landscape positions similar to those of the Red Bay soil and have a lighter red subsoil

Similar soils
- A Red Bay soil that has a surface layer of sandy clay loam

Land Use

Major uses: Urban development
Other uses: Landscaping and gardening

VaB—Varina sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Size of areas: 4 to 900 acres

Map Unit Composition

Varina and similar soils—90 percent
Dissimilar soils—10 percent

Characteristics of the Varina Soil

Typical profile
Surface layer:
0 to 7 inches—grayish brown sandy loam

Subsurface layer:
7 to 14 inches—pale yellow loamy sand

Subsoil:
14 to 18 inches—light yellowish brown sandy clay loam
18 to 26 inches—yellowish brown sandy clay

26 to 38 inches—brownish yellow sandy clay that has red mottles
38 to 57 inches—yellowish brown and brownish yellow sandy clay that has red and pale yellow mottles
57 to 81 inches—mottled red, yellow, and pale yellow sandy clay
81 to 118 inches—mottled red, yellow, and white sandy clay loam

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 4 to 5 feet from December through April
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Other distinctive properties: More than 5 percent plinthite, by volume, at a depth of 24 to 60 inches

Interpretive group
Land capability classification: 2e

Minor Components

Dissimilar soils
• Clarendon soils, which are moderately well drained and are in the lower positions
• Dothan soils, which are in landscape positions similar to those of the Varina soil and have less clay in the subsoil
• Soils that have ironstone nodules in the surface and subsurface layers and have plinthite within a depth of 16 to 26 inches

Similar soils
• A Varina soil that has a surface layer of loamy sand

Land Use

Major uses: Cropland
Other uses: Pasture and hayland

WnB—Wicksburg-Nankin complex, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges
Landform position: Convex to smooth slopes
Size of areas: 4 to 100 acres

Map Unit Composition

Wicksburg and similar soils—60 percent
Nankin and similar soils—30 percent
Dissimilar soils—10 percent

Characteristics of the Wicksburg Soil

Typical profile
Surface layer:
0 to 9 inches—dark grayish brown loamy sand

Subsurface layer:
9 to 26 inches—yellowish brown loamy sand

Subsoil:
26 to 30 inches—yellowish brown sandy clay loam that has very pale brown mottles
30 to 65 inches—yellowish brown clay that has red, white, and strong brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; slow in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2s

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65—mottled red, very pale brown, and weak red sandy clay loam that has pockets of thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep

Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
• Cowarts soils, which are in landscape positions similar to those of the Nankin soils and have less clay in the subsoil
• Dothan soils, which have less clay in the subsoil, contain plinthite, and are in slightly convex slope positions
• Fuquay soils, which are in landscape positions similar to those of the Wicksburg soil, have less clay in the subsoil, and contain plinthite within a depth of 60 inches

Similar soils
• A Wicksburg soil that has a sandy surface layer
• A Nankin soil that has a surface layer of sandy clay loam
• A Wicksburg soil that has a perched water table for short periods

Land Use

Major uses: Crops
Other uses: Woodland and pasture

WnC—Wicksburg-Nankin complex, 5 to 8 percent slopes

Map Unit Setting

Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Convex to smooth side slopes
Size of areas: 4 to 120 acres

Map Unit Composition

Wicksburg and similar soils—50 percent
Nankin and similar soils—40 percent
Dissimilar soils—10 percent

Characteristics of the Wicksburg Soil

Typical profile
Surface layer:
0 to 9 inches—dark grayish brown loamy sand

Subsurface layer:
9 to 26 inches—yellowish brown loamy sand

Subsoil:
26 to 30 inches—yellowish brown sandy clay loam that has very pale brown mottles
30 to 65 inches—yellowish brown clay that has red, white, and strong brown mottles

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Rapid in the surface and subsurface layers; slow in the subsoil
Available water capacity: Moderate
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 2s

Characteristics of the Nankin Soil

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

Subsoil:
8 to 13 inches—strong brown sandy clay loam
13 to 28 inches—yellowish red sandy clay that has light yellowish brown and red mottles
28 to 38—mottled yellowish red, light yellowish brown, and red sandy clay loam
38 to 55 inches—mottled yellowish red, light gray, and weak red sandy clay loam that has strata of very pale brown loamy sand

Substratum:
55 to 65—mottled red, very pale brown, and weak red sandy clay loam that has pockets of thin strata of very pale brown loamy sand

Soil properties and qualities
Depth class: Very deep
Drainage class: Well drained
Permeability class: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of more than 6 feet
Shrink-swell potential: Low
Flooding: None
Ponding: None
Other distinctive properties: None

Interpretive group
Land capability classification: 3e

Minor Components

Dissimilar soils
- Cowarts soils, which are in landscape positions similar to those of the Nankin soil and have less clay in the subsoil
- Dothan soils, which have less clay in the subsoil than the Nankin and Wicksburg soils, contain plinthite, and are in slightly convex positions
- Fuquay soils, which are in landscape positions similar to those of the Wicksburg soil, have less clay in the subsoil, and contain plinthite

Similar soils
- A Wicksburg soil that has a sandy surface layer
- A Nankin soil that has a surface layer of sandy clay loam
- A Wicksburg soil that has a perched water table for short periods

Land Use

Major uses: Pasture
Other uses: Woodland and crops

Prime Farmland

In this section, prime farmland is defined and the soils in Houston County that are considered prime farmland are listed.

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It 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

Figure 7.—Encroachment by urban development into an area of Dothan loamy sand, 2 to 5 percent slopes, which is prime farmland.

urban or built-up land or water areas. The soil qualities, 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. It 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 173,746 acres, or about 47 percent of the total area of Houston County, meets the soil requirements for prime farmland. The prime farmland is scattered throughout the county. A large part of the prime farmland is used for cultivated crops, pasture, and hay. The main crops are cotton, corn, and peanuts.

Houston County is generally considered a rural county. The town of Dothan, however, is considered a large population center. It has had a significant impact as areas of prime farmland are converted to industrial or urban uses (fig. 7).

The map units in the survey area that are considered prime farmland are listed at the end of this section. This list does not constitute a recommendation for a particular land use. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

The map units that meet the requirements for prime farmland are:

AnA Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded
ArA Ardilla fine sandy loam, 0 to 2 percent slopes
BnB Benevolence loamy sand, 2 to 5 percent slopes
CdA Clarendon loamy sand, 0 to 2 percent slopes
CoB Cowarts fine sandy loam, 2 to 5 percent slopes
DoA Dothan loamy sand, 0 to 2 percent slopes
DoB Dothan loamy sand, 2 to 5 percent slopes
DoC Dothan loamy sand, 5 to 8 percent slopes
DsA Dunbar-Goldsboro complex, 0 to 2 percent slopes
FaA Faceville fine sandy loam, 0 to 2 percent slopes
FaB Faceville fine sandy loam, 2 to 5 percent slopes
KhB Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded
NaB Nankin sandy loam, 2 to 5 percent slopes
OrA Orangeburg sandy loam, 0 to 2 percent slopes
OrB Orangeburg sandy loam, 2 to 5 percent slopes
OrC Orangeburg sandy loam, 5 to 8 percent slopes
RbA Red Bay sandy loam, 0 to 2 percent slopes
RbB Red Bay sandy loam, 2 to 5 percent slopes
RbC Red Bay sandy loam, 5 to 8 percent slopes
RvB Riverview silt loam, 0 to 5 percent slopes, occasionally flooded
VaB Varina sandy loam, 2 to 5 percent slopes

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 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 sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock 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

Kenneth M. Rogers, conservation agronomist, Natural Resources Conservation Services, helped prepare this section.

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

Planners of management systems for individual fields or farms should consider the detailed information given in the tables. Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

In 2002, Houston County had approximately

Figure 8.—Cotton modules after the harvest. Cotton is one of the dominant crops grown on the Coastal Plain in Alabama.

90,000 acres of cropland, 8,000 acres of hay, and 40,000 acres of pasture (ADAI, 2002). Approximately 31,000 acres of cotton, 5,000 acres of corn, 38,000 acres of peanuts, 7,000 acres of wheat, 3,700 acres of soybeans, 2,000 acres of grain sorghum, and 18,000 acres of winter annuals for grazing and cover were planted. A small acreage of truck crops was grown in the eastern part of the county. The total acreage used for cultivated crops and pasture has been decreasing slightly for several years. The current trend is toward the conversion of marginal cropland to forestland.

The potential in Houston County for increased production of food and fiber is good. Yields could be increased in cultivated areas if the most current technology was applied. This soil survey can help land users make sound land-management decisions and facilitate the application of crop-production technology.

The field crops that are suited to the soils and climate in Houston County include many that are not commonly grown because of economic considerations. Cotton (fig. 8), peanuts, and corn are the main row crops. Grain sorghum, vegetable crops, and similar crops can be grown if economic conditions are favorable. Wheat, rye, and oats are the only close-growing crops planted for grain production, although barley can be grown. The specialty crops grown in the county include sweet corn, cucumbers, peas, peppers (fig. 9), okra, melons, blueberries, and sod. Many of the soils in the survey area, including Dothan, Faceville, and Orangeburg soils, are well suited to specialty crops. Fuquay, Troup, and Bonifay soils are the best suited soils for cucumbers. If economic conditions are favorable, a large acreage of these crops can be grown. Pecans are the only orchard crops that are grown commercially in the county. Additional information regarding specialty crops can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service.

Soil erosion is a major concern on about one-third of the cropland and one-half of the pastureland in Houston County. Where the slope is more than 2 percent, erosion is a hazard. Examples of soils that are cultivated and that are subject to accelerated erosion include Benevolence, Cowarts, Dothan, Faceville, Nankin, Orangeburg, and Red Bay soils. Erosion can reduce productivity and can result in the pollution of streams. Productivity is reduced as the surface layer erodes and more of the subsoil is incorporated into the plow layer. Loss of the surface layer is especially damaging on soils that have a clayey subsoil, such as Faceville and Nankin soils. Controlling erosion on farmland minimizes the pollution of streams and improves the quality of water for municipal uses, for recreational uses, and for fish and wildlife.

Erosion-control practices provide a protective plant cover, increase the rate of water infiltration, and help to control runoff. A cropping system that keeps plant cover and crop residue on the surface for extended periods can hold soil losses to amounts that do not reduce the productive capacity of the soils. Including legumes and grasses in the cropping system helps to control erosion and improves tilth for the crops that follow in the rotation. The legumes also increase the nitrogen levels in the soils.

Applying a system of conservation tillage and leaving crop residue on the surface increase the rate of water infiltration and help to control runoff and erosion. Using a no-till method of planting reduces the hazard of erosion. This practice is suitable on most of the soils in the county.

Terraces and diversions help to control runoff and erosion. They are most practical on very deep, well drained soils that have uniform slopes. Orangeburg and Red Bay soils are examples. Sandy soils, such as Benevolence, Bonifay, Fuquay, Lucy, and Troup soils, are not suitable to terracing because gullies form easily when water is concentrated on the surface. Grassed waterways or underground tile outlets are essential in areas where terraces and diversions are installed. Diversions can be used to intercept surface runoff from hilly uplands and to divert the water around the fields to vegetated disposal areas.

Contour farming is a very effective erosion-control method in cultivated areas if used in conjunction with a water-disposal system. It is best suited to soils that

Figure 9.—Banana peppers grown as a specialty crop in an area of Fuquay loamy sand, 0 to 5 percent slopes. This soil is sandy and well drained, but has a loamy subsoil that improves available water capacity in the surface and subsurface layers.

have smooth, uniform slopes. Dothan, Faceville, Orangeburg, and Red Bay soils are examples.

Soil blowing can be a management concern in early spring on some soils in the uplands, especially if the soils are dry and are not protected by a plant cover. The hazard of erosion is generally highest after the seedbed has been prepared, after planting, and when the plants are small. Tillage methods that leave crop residue on the surface reduce the hazard of soil blowing. Conventional planting practices should include an implement that scratches the surface and leaves a rough, irregular pattern. Also, strips of close-growing crops are effective as windbreaks. If possible, seedbed preparation should be delayed until after March, which is generally windy. Additional information regarding the design of erosion-control practices is available at the local office of the Natural Resources Conservation Service.

Houston County has an adequate amount of rainfall for the commonly grown crops. Prolonged periods of drought are rare, but the distribution of rainfall during spring and summer generally results in droughty periods during the growing season in most years. Irrigation may be needed during these periods to reduce plant stress. Most of the soils that are commonly used for cultivated crops are suitable for irrigation; however, the amount of water applied should be regulated to prevent excessive runoff. Some soils, such as Annemaine and Wahee soils, have a slow rate of water infiltration that limits their suitability for irrigation.

Most of the soils that are used for crops in the county have a surface layer of sandy loam or loamy sand that is light in color and that has a low content of organic matter. Regular additions of crop residue, manure, and other organic material can improve soil structure and minimize crusting, thereby improving the rate of water infiltration.

The use of heavy tillage equipment can result in compaction of subsurface layers in most of the soils on the Coastal Plain. The compacted layers, which are called plow pans or traffic pans, are generally 2 to 12 inches below the surface. They restrict the rate of water infiltration and limit the growth of plant roots. The soils that are likely to develop traffic pans include Annemaine, Cowarts, Nankin, and Wahee soils.

Tilth is an important factor affecting plant growth because it influences the rate of water infiltration into the soil. Soils that have good tilth have sufficient organic matter and a granular, porous surface layer. Tilth is affected by the type of crop planted, past farming practices, and the degree of erosion that has occurred. Practices that maintain or increase the content of organic matter are needed for all of the soils that are used as cropland in the county.

Natural fertility is low in most of the soils in Houston County. Applications of agricultural limestone are needed to neutralize acidity in most of the soils. The crops grown in the county respond well to applications of lime and fertilizer. The levels of available phosphorus and potash are generally low in most of the soils. Soils in some fields, however, have a buildup of phosphorus or potassium because of past applications of large quantities of commercial fertilizer. Applications of lime and fertilizer should be based on the results of soil tests. Leaching is a concern in areas of sandy soils, such as Bonifay, Fuquay, Lucy, and Troup soils. Higher levels of nitrogen, applied in split applications, should be used on these soils. The Cooperative Extension System can help in determining the kinds and amounts of fertilizer and lime to apply.

Wetness is a management concern in areas of Bibb, Kinston, Mantachie, Meggett, Plummer, and Wahee soils. If crops are to be grown in areas of these soils, a drainage system is needed to reduce the wetness.

Bahiagrass, improved bermudagrass, and tall fescue are the main perennial grasses grown for pasture and hay in Houston County. Rye, ryegrass, and wheat are grown as annual cool-season grass forage. Millets, sorghums, and hybrid forage sorghums provide most of the annual warm-season grass forage. These annuals are generally grown in areas otherwise used as cropland. They are grown for temporary grazing and for hay. Most of the soils in the county are suited to arrowleaf clover, ball clover, crimson clover, white clover, and other cool-season forage legumes, especially if agricultural limestone is applied in proper amounts.

The well drained soils, such as Benevolence, Dothan, Orangeburg, and Red Bay soils, are well suited to alfalfa, which is a warm-season legume.

A combination of management practices is needed on all of the soils that are used as pasture or hayland. These practices include proper grazing management, control of weeds, proper application of fertilizer, rotation grazing, and the scattering of animal droppings.

Overgrazing, low rates of application of fertilizer, and acid soils are the main concerns for pasture management in the county. They can result in weak plants and poor stands that are quickly infested with weeds. Maintaining a good, dense cover of the desired pasture species helps to prevent the establishment of weeds.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in tables 5 and 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification for each map unit in the survey area is also shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. 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.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

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.

Crops other than those shown in tables 5 and 6 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 (USDA–SCS, 1961). 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.

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, 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, 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,* or *s,* 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); and *s* shows that the soil is limited mainly because it is shallow, droughty, or stony.

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* or *s* 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.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the yields tables.

Landscaping and Gardening

Kenneth M. Rogers, conservation agronomist, Natural Resources Conservation Service, helped prepare this section.

The soils in residential areas are used primarily as sites for homes, driveways, and streets. Remaining areas of each lot are commonly used for lawns, which enhance the appearance of the home; as gardens for vegetables or flowers and shrubs; as orchards for fruits and nuts; for recreational uses; as habitat for animals and birds; for trees, which provide shade and promote energy conservation; for vegetation and structures designed to abate noise, enhance privacy, and provide protection from wind; and for septic tank absorption fields. Because the outdoor areas are used for several purposes, careful planning and a good understanding of the soils are important.

This section contains general information regarding how soils affect landscaping and gardening. Other information can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service or from private businesses that provide landscaping and related services. The amount of soil information needed for use in some areas is beyond the scope of this survey and is more detailed than that provided at the map scale used. Onsite investigation is needed in these areas.

Most of the soils in the residential areas in Houston County have been disturbed to some degree during construction of houses, streets, driveways, and utility service. This construction involved cutting, filling, grading, and excavating. As a result, soil properties are more variable and less predictable than they are in undisturbed areas. Onsite examination is needed for the planning of land uses in disturbed areas.

Some of the poorest soils for plant growth in the county are Cowarts, Nankin, and Wicksburg soils that have had the surface layer removed during grading. The exposed dense, firm subsoil restricts root penetration, absorbs little rainfall, and results in excessive runoff. Incorporating organic matter into the soil improves tilth, increases the rate of water infiltration, and provides a more desirable rooting medium. Areas that are subject to intensive foot traffic should be covered with gravel or mulch, such as pine bark or wood chips.

Some soils, such as Dunbar, Grady, and Pansey soils, are wet. The wetness is caused by a high seasonal high water table, slow infiltration and percolation from precipitation, or both. The wetness limits the selection of plants to those that are tolerant of a high moisture content in the soil. Several methods can be used to minimize the effects of the wetness. Installing underground tile drains can lower the water table in permeable soils. Bedding the surface layer of slowly permeable soils helps to provide a satisfactory root zone for some plants.

Some soils, such as Bibb, Mantachie, and Kinston soils, are on flood plains. Most plants used for gardening and landscaping can be grown on these soils, but consideration should be given to the effects of floodwater. Surface drainage is a management concern because urban uses commonly result in increased rates of surface runoff, which increase the frequency and severity of flooding. Advice and assistance regarding drainage problems can be obtained from the Natural Resources Conservation Service, municipal and county engineering departments, and private engineering companies.

Sandy soils, such as Bonifay, Fuquay, Kenansville, and Troup soils, are droughty, have low fertility, and have a low content of organic matter. Droughtiness limits the selection of plants that can be grown unless irrigation is provided. Additions of organic matter increase the available water capacity and help to retain nutrients in the root zone. Supplemental watering and split applications of plant nutrients are recommended. Applying mulch, such as pine bark, wood chips, or pine straw, or incorporating peat moss or well-decomposed manure into the soil provides a more desirable medium for plant growth.

Natural fertility is low in most of the soils in Houston County. Most of the soils, with the exception of the Meggett soils, are strongly acid or very strongly acid. Additions of ground limestone are needed to neutralize the acidity of most of the soils. The original surface layer contains the most plant nutrients and has the most favorable pH for most plants. In many areas, the fertility of the surface layer has been improved by applications of lime and fertilizer. If the surface layer is removed during construction, the remaining soil is very acid and low in available plant nutrients. Also, some nutrients are unavailable for plant growth in acid soil conditions. Disturbed soils generally need larger amounts of lime and fertilizer, which should be applied according to the results of soil tests and the type of plants grown. Information on sampling for soil testing can be obtained from the Cooperative Extension System, the Natural Resources Conservation Service, and local nurseries.

In the following paragraphs, some of the plants that are used in landscaping and gardening and some management relationships between the plants and the soils are described. Information in this section should be supplemented by consultations with specialists at the Cooperative Extension System, the Natural Resources Conservation Service, or private landscaping and gardening businesses.

The grasses used for landscaping in Houston County are mainly vegetatively propagated species, such as zoysiagrass, hybrid bermudagrass, St. Augustine grass, and centipede grass, and seeded species, such as common bermudagrass and centipede grass. The grasses commonly used for short-term cover include ryegrass, rye, wheat, Sudangrass, and millet.

The vegetatively propagated plants are usually planted as sprigs, plugs, or sod. Additions of topsoil may be needed before planting in some areas. Also, lime and fertilizer should be applied and incorporated into the soil. The plants should be placed in close contact with the soil, and the plantings should be watered to ensure the establishment of the root system. St. Augustine grass, centipede grass, and certain strains of zoysiagrass are moderately shade tolerant. St. Augustine grass and zoysiagrass generally require more maintenance than centipede grass. The strains of hybrid bermudagrass are fast growing, but they are not as tolerant of shade as St. Augustine grass, centipede grass, or zoysiagrass.

Common perennial grasses that are established by seeding include common bermudagrass and centipede grass. Lime and fertilizer should be applied and incorporated into the soil before seeding. Proper planting depth is important when grasses are established from seed.

Short-term vegetative cover is used to protect the soil at construction sites or to provide cover between the planting seasons of the desired grass species. The most commonly used grasses for short-term cover are ryegrass for cool seasons and Sudangrass or millet for warm seasons. These species are annuals and die after the growing season. Periodic applications of lime and fertilizer are needed on all types of grasses. The kinds and amounts of lime and fertilizer to apply should be based on the results of soil tests.

Vines can provide vegetative cover in moderately shaded areas and in steep areas that cannot be mowed. English ivy and periwinkle can be used for ground cover or on walls and fences. All of these plants are propagated vegetatively, usually from potted plants or sprigs.

Mulches can be used for ground cover in areas where traffic is too heavy for grass cover, in areas where shrubs and flowers are desired with additional ground cover, and in densely shaded areas. Mulches provide effective ground cover. They also provide immediate cover to help control erosion in areas where live vegetation is not desired. Effective mulches include pine straw, small-grain straw, hay, composted grass clippings, wood chips, pine bark, and several manufactured materials. The type of mulch to use depends to some extent on the hazard of erosion. Mulches also can be used to conserve soil moisture and to control weeds around trees, shrubs, and flowers.

Shrubs are used primarily to enhance the appearance of homesites. They also can be used to control traffic. They can be effective in dissipating the energy from raindrops and from runoff from roofs. Most native and adapted species add variety to residential settings. The effects of acidity and fertility levels on growth vary greatly among shrub types.

Vegetable and flower gardens are important to many individuals and businesses. However, the soils in areas where homes and businesses are established may not be suited to vegetables and flowers. Soils that have been disturbed by construction may not be productive unless topsoil is applied. Soils that have a slope of more than 8 percent have poor potential for vegetable gardening because of the hazard of erosion if the soils are tilled. Generally, steeper soils have a thinner surface layer. Flower gardening is possible in the steeper areas, however, if mulches are used to help control erosion. Incorporating composted tree leaves and grass clippings into the soil improves fertility, tilth, and moisture content. Additional information regarding vegetable crops is included under the heading “Crops and Pasture.”

Most garden plants grow best in soils that have a pH between 5.5 and 6.5 and that have a high fertility level. Applying too much fertilizer or using fertilizers that have the wrong combination of plant nutrients can be avoided by soil testing, which is the only effective method of determining the amount and kind of fertilizer that should be applied. Information regarding soil testing can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service or from a retail fertilizer business.

Trees are important in homesite landscaping. Information regarding relationships between soils and trees is available in the section "Woodland Management and Productivity." Special assistance regarding urban forestry can be obtained from the Alabama Forestry Commission.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The hydric soils and criteria are also listed in table 7.

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 each 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 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, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999), "Keys to Soil Taxonomy" (Soil Survey Staff, 1998), and the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period 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 in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1998).

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.

The following map units meet 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, 1998).

BOA Bibb, Osier, and Kinston soils, 0 to 1 percent slopes, frequently flooded
DBA Dorovan, Byars, and Grady soils, ponded
GbA Grady-Byars complex, 0 to 2 percent slopes
MtA Meggett loam, 0 to 1 percent slopes, frequently flooded
MIA Mantachie, Iuka, and Kinston soils, 0 to 1 percent slopes, frequently flooded
PaA Pansey fine sandy loam, depressional
PeA Pansey fine sandy loam, 0 to 2 percent slopes, occasionally flooded
PmA Plummer sand, 0 to 2 percent slopes
UbA Urban land-Bibb-Kinston complex, 0 to 2 percent slopes, frequently flooded

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units 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.

AnA Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded

ArA Ardilla fine sandy loam, 0 to 2 percent slopes
BnB Benevolence loamy sand, 2 to 5 percent slopes
BnD Benevolence loamy sand, 5 to 15 percent slopes
BuB Buncombe-Bigbee complex, 0 to 5 percent slopes, frequently flooded
CdA Clarendon loamy sand, 0 to 2 percent slopes
CoB Cowarts fine sandy loam, 2 to 5 percent slopes
DoA Dothan loamy sand, 0 to 2 percent slopes
DoB Dothan loamy sand, 2 to 5 percent slopes
DoC Dothan loamy sand, 5 to 8 percent slopes
DsA Dunbar-Goldsboro complex, 0 to 2 percent slopes
FaA Faceville fine sandy loam, 0 to 2 percent slopes
FaB Faceville fine sandy loam, 2 to 5 percent slopes
FqB Fuquay loamy sand, 0 to 5 percent slopes
KeA Kenansville loamy sand, 0 to 2 percent slopes, rarely flooded
KhB Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded
LcB Lucy loamy sand, 0 to 5 percent slopes
LcC Lucy loamy sand, 5 to 8 percent slopes
LtE Lucy-Troup complex, 8 to 20 percent slopes
NaB Nankin sandy loam, 2 to 5 percent slopes
NcD Nankin-Cowarts complex, 5 to 12 percent slopes
NpE Nankin-Lucy-Springhill complex, 12 to 20 percent slopes
NsE Nankin-Springhill-Henderson complex, 8 to 20 percent slopes, cobbly
OiA Ocilla-Albany complex, 0 to 2 percent slopes
OrA Orangeburg sandy loam, 0 to 2 percent slopes
OrB Orangeburg sandy loam, 2 to 5 percent slopes
OrC Orangeburg sandy loam, 5 to 8 percent slopes
Pt Pits
RbA Red Bay sandy loam, 0 to 2 percent slopes
RbB Red Bay sandy loam, 2 to 5 percent slopes
RbC Red Bay sandy loam, 5 to 8 percent slopes
RvB Riverview silt loam, 0 to 5 percent slopes, occasionally flooded
TnB Troup-Bonifay complex, 0 to 5 percent slopes
TnC Troup-Bonifay complex, 5 to 8 percent slopes
TyB Troup-Lucy complex, 0 to 5 percent slopes
UcA Urban Land-Clarendon-Ardilla complex, 0 to 2 percent slopes
UdB Urban land-Dothan complex, 0 to 5 percent slopes
UrB Urban land-Red Bay complex, 0 to 5 percent slopes
VaB Varina sandy loam, 2 to 5 percent slopes
WnB Wicksburg-Nankin complex, 2 to 5 percent slopes
WnC Wicksburg-Nankin complex, 5 to 8 percent slopes

Forest Productivity and Management

In 2000, about 166,100 acres in Houston County, or about 45 percent of the county, was forestland. The acreage of forestland increased by about 33 percent from 1990 to 2000, primarily because of the conversion of cropland and pasture to forestland. Private landowners own 96 percent of the forestland in the county.

The forest types in Houston County include 22,100 acres of longleaf-slash, 26,800 acres of loblolly-shortleaf (fig. 10), 31,400 acres of oak-pine, 29,600 acres of oak-hickory, 50,100 acres of oak-gum-cypress, and 6,000 acres of elm-ash-cottonwood (Hartsell and Brown, 2000).

The tables 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 forest management.

Forest Productivity

In table 8, 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 (USDA–NRCS, 2000).

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.

Figure 10.—A stand of loblolly pine in an area of Dothan loamy sand, 2 to 5 percent slopes. This map unit has a site index of 90 for loblolly pine.

Forest Management

In tables 9a and 9b, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice 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 practice. 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 practice. 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 practice or that extreme measures are needed to overcome the undesirable soil properties.

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 forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for 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 for forest management practices. 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 (http://soils.usda.gov/) (USDA–NRCS, 2000).

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, 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.

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 erosion on roads and trails* are based on the soil erodibility 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 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 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 seedling mortality* are based on flooding, ponding, depth to a water table, reaction, 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.

Recreation

The soils of the survey area are rated in tables 10a and 10b according to limitations that affect their suitability for recreation. 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 tables 10a and 10b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

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, permeability, and large stones. The soil properties that affect the growth of plants are depth to a cemented pan, permeability, 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, permeability, and large stones. The soil properties that affect the growth of plants are depth to a cemented pan, permeability, 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, permeability, and large stones. The soil properties that affect the growth of plants are depth to a cemented pan, permeability, 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 a cemented pan; and the available water capacity in the upper 40 inches. 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

Figure 11.—A gopher tortoise retreating to its burrow in an area of Kenansville loamy sand, 0 to 2 percent slopes, rarely flooded. Gopher tortoises favor well drained, sandy soils. They dig long, sloping burrows that are up to 30 feet long and extend as deep as 9 feet below the surface. They feed on grasses and other plant material near the ground.

suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Houston County is dominantly a rural area and has suitable habitat for many kinds of wildlife. It is about 45 percent forestland and is interspersed with areas of cultivated crops, pasture, and hay (Hartsell and Brown, 2000).

Houston County supports a variety of mammals, reptiles, and birds. The common species of wild game in the county are eastern wild turkey, bobwhite quail, white-tailed deer, eastern cottontail rabbit, fox squirrel, gray squirrel, swamp rabbit, feral hog, mourning dove, Canada geese, and various species of ducks. The nongame wildlife species include armadillos, alligators, gopher tortoise (fig. 11), various venomous and nonvenomous snakes, and various species of turtles. Common furbearers include beaver, bobcat, coyote, fox, opossum, mink, muskrat, nutria, otter, raccoon, and skunk.

Marsh and wading birds in the county include cattle egrets, great egrets, great blue herons, green-backed herons, yellow-crowned night herons, purple gallinules, common moorhens, anhinga, and white ibis. Raptors and allied species include turkey and black vulture; red-tailed, broad-winged, and red-shouldered hawks; barred and screech owls; and American kestrel. Migratory birds found in the county include bobolinks, song sparrow, pine siskin, American goldfinch, indigo bunting, northern cardinal, Carolina wren, bluebirds, and various warblers, including the yellow, pine, hooded, and prothonotary. Robins, thrushes, crows, blackbirds, blue jays, meadowlarks, mockingbirds, and various woodpeckers also inhabit the county.

The wildlife species in Houston County that the

Federal Government has listed as threatened or endangered include the red-cockaded woodpecker, bald eagle, and American alligator.

In upland areas, the forestland generally consists of loblolly pine, longleaf pine, or mixed pines and hardwoods. On the flood plains along streams and rivers, the forestland consists of bottomland hardwoods. The forest types and their associated plant communities are of major importance to wildlife. Many of these forestland areas are managed primarily to provide habitat for various species of wildlife, including bobwhite quail, white-tailed deer, and turkey.

Management practices that benefit wildlife, including prescribed burning, creating or maintaining openings in the forest, and thinning stands, are common throughout the county.

Areas of cultivated crops, hay, and pasture are commonly interspersed with the forestland. The open areas are very important to many species of wildlife. The areas of cropland are primarily used for agricultural commodities, such as cotton, corn, peanuts, and soybeans. The pasture and hayland are primarily used for perennial grasses, such as bahiagrass and bermudagrass.

Wetlands are used by many kinds of wildlife. Many of the furbearers and wading birds depend almost exclusively upon these areas. Natural depressions and areas of saturated soils along creeks and rivers, bodies of open water, and beaver ponds make up most of the wetland areas in the county. They occur mostly along Bear, Big, Bruners Gin, Bryans, Cowarts, Omusee, and Spring Creeks and in areas adjacent to the Chattahoochee and Little Choctawhatchee Rivers.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 11, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, brome, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

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. Additional information is available in the “National Engineering Handbook” (USDA–NRCS, 2002).

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, 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, permeability, 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, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; 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

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. Tables 12a and 12b 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, 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, 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 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), 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. 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; 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

Tables 13a and 13b 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 60 inches 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. Permeability, depth to a water table, ponding, and flooding affect absorption of the effluent. Stones and boulders 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 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, permeability, depth to a water table, ponding, flooding, large stones, and content of organic matter.

Soil permeability 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 permeability rate of more than 2 inches per hour 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 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 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 permeability, depth to a water table, ponding, slope, flooding, texture, stones, highly organic layers, and soil reaction. 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.

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, permeability, depth to a water table, ponding, and slope.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability 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, and reaction.

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 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 be too acid.

Construction Materials

Tables 14a and 14b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* 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 table 14a, 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.

The soils are rated *good, fair,* or *poor* as potential sources of topsoil, reclamation material, and roadfill. 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 topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

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, 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.

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 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).

Water Management

Table 15 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 limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives for each soil the restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

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 permeability of the soil and the depth to 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. 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 about 5 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 organic matter. 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. The content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, a cemented pan, or other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; and subsidence of organic layers. Excavating and grading and the stability of ditchbanks are affected by large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones. The performance of a system is affected by the depth of the root zone and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, and large stones affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, and slope affect the construction of grassed waterways. Low available water capacity, restricted rooting depth, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many 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. These results are reported in tables 20 and 21.

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 index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 16 gives the engineering classifications and the range of index 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, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

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.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Soil Features

Table 17 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. An example is a fragipan. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

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.

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.

Water Features

Table 18 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.

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. Table 18 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. Table 18 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.

Physical and Chemical Properties

Table 19 shows estimates of some physical and 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.

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.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 19, 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, permeability, 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 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.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability 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 table 19, 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 table 19 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 permeability. 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.

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.

Physical and Chemical Analyses of Selected Soils

The results of physical analysis of several typical pedons in the survey area are given in table 20 and the results of chemical analysis in table 21. The data are for soils sampled at carefully selected sites. Unless otherwise indicated, the pedons are typical of the series. They are described in the section "Soil Series and Their Morphology." Soil samples were analyzed by Auburn University College of Agriculture (Hajek and others, 1972).

Most determinations, except those for grain-size analysis and bulk density, were made on soil material smaller than 2 millimeters in diameter. Measurements reported as percent or quantity of unit weight were calculated on an ovendry basis. The methods used in obtaining the data are indicated in the list that follows. The codes in parentheses refer to published methods (USDA, 1996).

Sand—(0.05-2.0 mm fraction) weight percentages of material less than 2 mm (3A1).
Silt—(0.002-0.05 mm fraction) pipette extraction, weight percentages of all material less than 2 mm (3A1).
Clay—(fraction less than 0.002 mm) pipette extraction, weight percentages of material less than 2 mm (3A1).
Organic carbon—dry combustion (6A2d).
Cation-exchange capacity—ammonium acetate, pH 7.0, steam distillation (5A8b).
Effective cation-exchange capacity—sum of extractable cations plus aluminum (5A3b).
Base saturation—ammonium acetate, pH 7.0 (5C1).
Reaction (pH)—1:1 water dilution (8C1f).
Aluminum—potassium chloride extraction (6G9c).

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). 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. Table 22 shows the classification of the soils in the survey area. 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, kaolinitic, 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. An example is the Kolomoki series.

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). 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, 1998). 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.

Albany Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Rapid in the surface and subsurface layers; moderate in the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain

Landform: Flats
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Grossarenic Paleudults

Commonly Associated Soils

- Fuquay soils, which are in the higher positions, are well drained, and are arenic
- Ocilla soils, which are in positions similar to those of the Albany soils and are arenic
- Plummer soils, which are in the lower positions and are poorly drained

Typical Pedon

Albany sand; from the Official Series Description for the typical pedon located in Effingham County, Georgia; USGS Springfield North topographic quadrangle; lat. 32 degrees 20 minutes 39.8 seconds N. and long. 81 degrees 21 minutes 27.7 seconds W.

Ap—0 to 7 inches; dark gray (10YR 4/1) sand, gray (10YR 5/1) dry; single grained; loose; few fine and medium roots; very strongly acid; abrupt smooth boundary.

E1—7 to 25 inches; light yellowish brown (2.5Y 6/4) sand; single grained; loose; few fine and medium roots; few fine distinct yellow (2.5Y 7/6) masses of iron accumulation and light gray (2.5Y 7/2) iron depletions; very strongly acid; clear wavy boundary.

E2—25 to 42 inches; brownish yellow (10YR 6/8) loamy sand; single grained; loose; common medium prominent yellow (2.5Y 7/6) masses of iron accumulation and few fine prominent light gray (2.5Y 7/2) iron depletions; very strongly acid; gradual wavy boundary

E3—42 to 48 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; few fine faint yellowish brown (10YR 5/6) masses of iron accumulation and many medium prominent light gray (10YR 7/1) iron depletions; very strongly acid; gradual wavy boundary.

Bt1—48 to 56 inches; light yellowish brown (10YR 6/4) sandy loam; weak medium subangular blocky structure; very friable; few slightly hard lumps or concretions; sand grains coated and bridged with clay; few lenses of light gray sand; few fine prominent strong brown (7.5YR 5/6) and few medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; common medium faint pale brown (10YR 6/3) and common medium distinct light gray (10YR 7/1) iron depletions; very strongly acid; gradual smooth boundary.

Bt2—56 to 64 inches; about 25 percent light yellowish brown (10YR 6/4), 25 percent light gray (10YR 7/1), 25 percent yellowish brown (10YR 5/8), and 25 percent pale yellow (2.5Y 7/4) sandy clay loam; moderate medium subangular blocky structure; friable; few slightly hard concretions; discontinuous clay films in some pores; sand grains coated and bridged; few fine lenses of light gray (10YR 7/1) sand; the areas of light yellowish brown, yellowish brown, and pale yellow are iron accumulations, and the areas of light gray are iron depletions; very strongly acid; gradual wavy boundary

Btg1—64 to 70 inches; gray (N 6/0) sandy clay loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged; few fine light gray (2.5Y 7/1) lenses of sand; many coarse prominent pale yellow (2.5Y 7/4) and yellow (10YR 7/6) and few fine prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btg2—70 to 88 inches; about 34 percent gray (N 6/0), 33 percent red (10R 4/8), and 33 percent yellow (2.5Y 7/6) sandy clay loam; weak medium subangular blocky structure; very friable; common medium lenses of light gray (N 7/0) sand; the areas in shades of red and yellow are iron accumulations, and the areas in shades of gray are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 70 to more than 80 inches
Content and size of rock fragments: None
Content of plinthite: Less than 5 percent throughout
Reaction: Extremely acid to slightly acid in the upper part, except where limed; extremely acid to moderately acid in the lower part

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 2 to 6, and chroma of 1 or 2; or neutral in hue and value of 2 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand
Redoximorphic features—few to many in shades of gray, yellow, brown, and red

Eg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 2 or less; or neutral in hue and value of 1 or 2
Texture—same range as the E horizon
Redoximorphic features—few to many iron accumulations in shades of red, brown, or yellow

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 4 or 6
Texture—sandy loam, fine sandy loam, loamy sand, or loamy fine sand
Redoximorphic features—few to many in shades of gray, yellow, brown, and red

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8; or no matrix color and multicolored in shades of red, yellow, brown, and gray
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many in shades of gray, yellow, brown, and red

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 or 2; neutral in hue and value of 4 to 8; or no matrix color and multicolored in shades of gray, red, yellow, and brown
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many in shades of yellow, brown, and red

Annemaine Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Clayey and loamy sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

- Bigbee and Buncombe soils, which are in the higher levee positions along drainageways and are excessively drained
- Cahaba and Kolomoki soils, which are in the higher positions and are well drained
- Meggett soils, which are in the lower backswamp positions and are poorly drained
- Wahee soils, which are in the slightly lower positions and are somewhat poorly drained

Typical Pedon

Annemaine fine sandy loam; from the Official Series Description for the typical pedon located in Wilcox County, Alabama; USGS Crumpstonia topographic quadrangle; lat. 32 degrees 04 minutes 19 seconds N. and long. 87 degrees 23 minutes 51 seconds W.

Ap—0 to 5 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.
E—5 to 9 inches; light yellowish brown (10YR 6/4) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; common fine pores; very strongly acid; clear smooth boundary.
Bt1—9 to 16 inches; yellowish red (5YR 4/6) clay; red (2.5YR 4/6) ped surfaces; moderate fine and medium subangular blocky structure; firm; common fine roots and pores; common faint clay films on faces of peds and in pores; few fine flakes of mica; very strongly acid; gradual wavy boundary.
Bt2—16 to 37 inches; yellowish red (5YR 4/6) clay; moderate fine and medium subangular blocky structure; firm; few fine roots and pores; faint clay films on faces of peds; few fine flakes of mica; common medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) masses of iron accumulation and prominent light gray (10YR 6/1) iron depletions; very strongly acid; gradual wavy boundary.
BC—37 to 49 inches; about 25 percent dark red (2.5YR 3/6), 25 percent strong brown (7.5YR 5/6), 25 percent light gray (10YR 6/1), and 25 percent light yellowish brown (10YR 6/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots and pores; few faint clay films on faces of some peds; common fine flakes of mica; the areas of dark red, strong brown, and light yellowish brown are masses of iron accumulation, and the areas of light gray are iron or clay depletions; very strongly acid; gradual wavy boundary.
C—49 to 74 inches; about 25 percent light gray (10YR 6/1), 25 percent strong brown (7.5YR 5/6), 25 percent dark red (2.5YR 3/6), and 25 percent light yellowish brown (10YR 6/4) sandy clay loam;

massive; firm; many fine flakes of mica; the areas of dark red, strong brown, and light yellowish brown are masses of iron accumulation, and the areas of light gray are iron or clay depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to slightly acid in the A and E horizons; very strongly acid or strongly acid in the B and C horizons
Other features: Some pedons have a 2C horizon that is loamy sand or sand below a depth of about 50 inches

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8. In some pedons, the upper part of the Bt horizon is less than 7 inches thick and has hue of 7.5YR, value of 5 or 6, and chroma of 6 to 8.
Texture—silty clay loam, clay loam, silty clay, or clay
Redoximorphic features—iron accumulations in shades of brown, yellow, and red and iron depletions within the upper 20 inches of the horizon in shades of light gray

BC horizon (where present):
Color—the same range in hue, value, and chroma as the Bt horizon; or multicolored in shades of red, brown, yellow, or gray
Texture—sandy clay loam, loam, or clay loam
Redoximorphic features—few to many masses of iron accumulation in shades of red, brown, and yellow and iron depletions in shades of gray

C horizon:
Color—hue of 2.5YR to 2.5Y, value of 5 to 8, and chroma of 1 to 8; or multicolored with these colors
Texture—loamy sand, sandy loam, fine sandy loam, or sandy clay loam; or stratified sand to clay with a content of crushed clay of 5 to 25 percent
Redoximorphic features—few to many masses of iron accumulation in shades of red, brown, and yellow and iron depletions in shades of gray

Ardilla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults

Commonly Associated Soils

- Clarendon soils, which are in the higher positions and are moderately well drained
- Dothan soils, which are in the higher positions and are well drained
- Dunbar soils, which are in positions similar to those of the Ardilla soils and have a clayey subsoil
- Goldsboro soils, which are in the slightly higher positions and are moderately well drained
- Pansey soils, which are in the slightly lower positions and are poorly drained

Typical Pedon

Ardilla fine sandy loam, 0 to 2 percent slopes; from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Madrid topographic quadrangle; lat. 31 degrees 02 minutes 30.5 seconds N. and long. 85 degrees 23 minutes 40.2 seconds W.

Ap—0 to 4 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; clear smooth boundary.
E—4 to 9 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; few fine roots and pores; strongly acid; clear smooth boundary.
Bt1—9 to 15 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak medium subangular blocky structure; very friable; few fine roots; many small and medium pores; sand grains coated and bridged with clay films; strongly acid; gradual smooth boundary.
Bt2—15 to 30 inches; yellowish brown (10YR 5/6)

sandy clay loam; weak medium subangular blocky structure; friable; few fine roots and pores; sand grains coated and bridged with clay films; few faint clay films on surfaces of peds; many medium distinct light gray (10YR 6/1) iron depletions and common medium faint strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual smooth boundary.

Btx1—30 to 38 inches; about 34 percent yellowish brown (10YR 5/6), 33 percent light gray (10YR 6/1), and 33 percent strong brown (7.5YR 5/6) sandy clay loam; weak to medium subangular blocky structure; about 45 percent of the volume—the part dominated by yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6)—is firm, brittle, and compact; the light gray (10YR 6/1) areas are friable; few fine roots and pores; few faint clay films on vertical and horizontal surfaces of peds; few ironstone pebbles; strongly acid; gradual smooth boundary.

Btx2—38 to 60 inches; about 25 percent red (2.5YR 4/6), 25 percent strong brown (7.5YR 5/6), 25 percent light yellowish brown (2.5Y 6/4), and 25 percent light gray (10YR 6/1) reticulately mottled sandy clay loam; weak medium subangular blocky structure; about 40 to 50 percent of the volume—the areas dominated by red (2.5YR 4/6) and strong brown (7.5YR 5/6)—are firm and brittle; the light yellowish brown (10YR 6/4) and light gray (10YR 6/1) areas are friable; few fine pores; thin patchy clay films on vertical and horizontal surfaces of peds; about 15 percent ironstone pebbles; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 15 percent ironstone pebbles throughout
Content of plinthite: 0 to 5 percent to a depth of 30 inches and 0 to 15 percent below a depth of 30 inches
Reaction: Very strongly acid to moderately acid in the upper part; very strongly acid or strongly acid in the lower part

A or Ap horizon:
Color—hue of 10YR, value of 2 to 6, and chroma of 1 or 2
Texture—fine sandy loam, sandy loam, loamy sand, loamy fine sand, or coarse sand

E horizon (where present):
Color—hue of 10YR, value of 3 to 6, and chroma of 2 to 6
Texture—fine sandy loam, sandy loam, loamy sand, loamy fine sand, or coarse sand

BE or BA horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, coarse sand, loamy sand, or loamy fine sand

Bt horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam

Bt horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—iron or clay depletions in shades of gray and iron accumulations in shades of brown, yellow, and red

Btx horizon:
Color—hue of 2.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8; or no dominant color and multicolored in shades of red, brown, yellow, and gray
Texture—sandy clay loam or sandy clay
Redoximorphic features—iron or clay depletions in shades of red, yellow, brown, and gray

Benevolence Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid in the upper part of the subsoil; moderate in the lower part of the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Broad ridges and hillslopes
Landform position: Smooth and slightly convex slopes
Slope: 0 to 15 percent
Taxonomic class: Coarse-loamy, kaolinitic, thermic Typic Kandiudults

Commonly Associated Soils

- Lucy soils, which are in the slightly higher positions and are arenic
- Red Bay, which are in positions similar to those of the Benevolence soils, are rhodic, and are fine-loamy
- Troup soils, which are in the slightly higher positions, are excessively drained, and are grossarenic

Typical Pedon

Benevolence loamy sand; from the Official Series Description for the typical pedon located in Randolph County, Georgia; USGS Benevolence topographic quadrangle; lat. 31 degrees 54 minutes 33 seconds N. and long. 84 degrees 41 minutes 47 seconds W.

Ap—0 to 12 inches; brown (7.5YR 4/4) loamy sand; weak fine granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.

Bt1—12 to 37 inches; yellowish red (5YR 5/6) sandy loam; weak coarse subangular blocky structure; friable; many fine and medium roots; sand grains coated and bridged with clay; moderately acid; gradual wavy boundary.

Bt2—37 to 47 inches; red (2.5YR 4/8) sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; most sand grains coated and bridged with clay; moderately acid; gradual wavy boundary.

Bt3—47 to 80 inches; red (2.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint discontinuous clay films on faces of peds; strongly acid.

Range in Characteristics

Thickness of the solum: More than 80 inches
Depth to bedrock: More than 80 inches
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 3 or 4
Texture—loamy fine sand or loamy sand

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 4
Texture—loamy fine sand or loamy sand

EB horizon (where present):
Color—hue of 7.5YR, value of 5 or 6, and chroma of 5 or 6
Texture—loamy fine sand or loamy sand

BE horizon (where present):
Color—hue of 5YR or 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—fine sandy loam or sandy loam in the upper part; sandy loam or sandy clay loam in the lower part

Bibb Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Loamy and sandy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth and slightly concave slopes
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

Commonly Associated Soils

- Bigbee soils, which are in the higher levee positions and are sandy throughout
- Kinston soils, which are more distant from the drains than the Bibb soils and have a loamy substratum
- Osier soils, which are typically adjacent to the drains and are sandy throughout

Typical Pedon

Bibb sandy loam; from the Official Series Description for the typical pedon located in Autauga County, Alabama; USGS Prattville topographic quadrangle; lat. 32 degrees 25 minutes 01 second N. and long. 86 degrees 25 minutes 55 seconds W.

A—0 to 4 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; friable; common fine roots and pores; strongly acid; abrupt wavy boundary.

Ag—4 to 12 inches; about 50 percent dark gray (N 4/0) and 50 percent dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; few fine roots and pores; common fine strong brown (7.5YR 5/6) stains around decayed roots; strongly acid; clear wavy boundary.

Cg1—12 to 37 inches; gray (5Y 5/1) sandy loam; massive; friable; few fine roots and pores; common thin strata of silt loam to loamy sand; some strata have bits of partially decomposed organic materials; common medium strong brown (7.5YR 5/6) stains around decayed roots; very strongly acid; clear wavy boundary.

Cg2—37 to 60 inches; gray (N 5/0) silt loam; massive; slightly sticky; common strata of sandy loam and loamy sand; common thin strata with partially decomposed organic materials; strongly acid.

Range in Characteristics

Content and size of rock fragments: 0 to 10 percent,

by volume, throughout, but may range up to 35 percent in thin strata below a depth of 40 inches
Content of plinthite: None
Reaction: Extremely acid to strongly acid throughout

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 1 to 3
Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam

Ag horizon (where present):
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2; or neutral in hue and value of 3 to 7
Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam
Redoximorphic features—none to common iron accumulations in shades of brown and yellow

Cg horizon:
Color—hue of 10YR to 5BG, value of 3 to 7, and chroma of 1 or 2; or neutral in hue and value of 3 to 7
Texture—the upper part of the Cg horizon is sandy loam, fine sandy loam, loam, or silt loam or is stratified with these textures. In most pedons, it has thin strata of finer or coarser textured material. The range in texture of the lower part of the Cg horizon includes sand, loamy sand, and loamy fine sand in addition to the textures in the range of the upper part.
Redoximorphic features—few to many iron accumulations in shades of red, yellow, and brown

Bigbee Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Rapid
Parent material: Sandy alluvial sediments
Landscape: Coastal Plain
Landform: Natural levees
Landform position: Smooth to convex slopes, typically adjacent to the drain
Slope: 0 to 5 percent
Taxonomic class: Thermic, coated Typic Quartzipsamments

Commonly Associated Soils

- Annemaine and Wahee soils, which are in the lower terrace positions, have a clayey subsoil, and are moderately well drained and somewhat poorly drained, respectively
- Bibb soils, which are in the lower positions, have a coarse-loamy subsoil, and are poorly drained
- Buncombe soils, which are in the lower levee positions, more distant from the drains than the Bigbee soils
- Cahaba and Kolomoki soils, which are in terrace positions, are well drained, and have a fine-loamy and clayey subsoil, respectively
- Riverview soils, which are in the lower, smooth positions, have a fine-loamy control section, and are well drained

Typical Pedon

Bigbee loamy sand; from the Official Series Description for the typical pedon located in Clay County, Mississippi; USGS Waverly topographic quadrangle; lat. 33 degrees 36 minutes 44 seconds N. and long. 88 degrees 35 minutes 28 seconds W.

Ap—0 to 8 inches; dark yellowish brown (10YR 3/4) loamy sand; single grained; loose; few fine roots; strongly acid; clear smooth boundary.
C1—8 to 17 inches; yellowish red (5YR 4/8) loamy sand; single grained; loose, very friable; few fine roots; strongly acid; abrupt smooth boundary.
C2—17 to 32 inches; yellowish brown (10YR 5/4) sand; single grained; loose; very strongly acid; clear smooth boundary.
C3—32 to 80 inches; pale brown (10YR 6/3) sand; single grained; loose; very strongly acid.

Range in Characteristics

Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, sand, or fine sand

C horizon (upper part):
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma of 4 to 8
Texture—loamy sand, sand, or fine sand
Redoximorphic features—iron accumulations in shades of brown

C horizon (lower part):
Color—hue of 10YR, value of 6 to 8, and chroma of 1 to 6
Texture—sand or fine sand
Redoximorphic features—iron depletions in shades of gray below a depth of 40 inches and

iron accumulations in shades of brown and yellow

Bonifay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the surface and subsurface layers; moderate in the upper part of the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly concave slopes
Slope: 0 to 5 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults

Commonly Associated Soils

- Fuquay soils, which are in the higher positions and are arenic
- Plummer soils, which are in the lower positions and are poorly drained
- Troup soils, which are in the higher positions, have a red subsoil, and do not have a perched water table
- Wicksburg soils, which are in positions similar to those of the Bonifay soils, have a clayey subsoil, and are arenic

Typical Pedon

Bonifay loamy sand; from the typical pedon located in Barbour County, Alabama; USGS Clayton South topographic quadrangle; lat. 31 degrees 24 minutes 25 seconds N. and long. 85 degrees 24 minutes 25 seconds W.

Ap—0 to 4 inches; brown (10YR 5/3) loamy sand; single grained; loose; slightly acid; clear smooth boundary.

E1—4 to 9 inches; yellowish brown (10YR 5/4) loamy sand; very pale brown (10YR 7/3) uncoated sand grains; single grained; loose; slightly acid; clear wavy boundary.

E2—9 to 32 inches; brownish yellow (10YR 6/6) loamy sand; common distinct very pale brown (10YR 7/3) uncoated sand grains; single grained; loose; moderately acid; gradual wavy boundary.

E3—32 to 50 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; common medium distinct very pale brown (10YR 7/3) areas of iron depletions; strongly acid; gradual wavy boundary.

Btv—50 to 74 inches; light yellowish brown (10YR 6/4) sandy clay loam; weak fine subangular blocky structure; friable; strong brown (7.5YR 5/8) and red (2.5YR 4/8) masses of iron accumulation; about 20 percent, by volume, plinthite; strongly acid.

Range in Characteristics

Thickness of the solum: 70 to 80 inches
Content and size of rock fragments: Few ironstone pebbles in the surface layer of some pedons
Content of plinthite: 5 percent or more, starting at a depth of 42 to 60 inches
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 10YR to 2.5Y, value of 3 to 6, and chroma of 1 to 3; or neutral in hue and value of 4 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand
Redoximorphic features—few to many iron depletions in shades of gray and iron accumulations in shades of yellow, brown, and red

Bt horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—few or common areas of iron depletions in shades of gray and masses of iron accumulation in shades of yellow, brown, and red

Btv horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; or multicolored in shades of gray, red, yellow, and brown
Texture—sandy clay loam or sandy clay
Redoximorphic features—few or common masses of iron accumulation in shades of yellow, brown, and red and areas of iron depletions in shades of gray

Buncombe Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Rapid

Parent material: Sandy alluvial sediments
Landscape: Coastal Plain
Landform: Natural levees
Landform position: Convex slopes
Slope: 0 to 5 percent
Taxonomic class: Mixed, thermic Typic Udipsamments

Commonly Associated Soils

- Annemaine soils, which are in low terrace positions, have a clayey subsoil, and are moderately well drained
- Bigbee soils, which are in the slightly higher positions and are typically directly adjacent to drains
- Cahaba and Kolomoki soils, which are in the higher terrace positions and have a fine-loamy and clayey subsoil, respectively
- Riverview soils, which are in the lower positions, have a fine-loamy subsoil, and are well drained

Typical Pedon

Buncombe loamy sand; from the Official Series Description for the typical pedon located in Catawba County, North Carolina; USGS topographic quadrangle and latitude and longitude unavailable.

Ap—0 to 10 inches; brown (10YR 5/3) loamy sand; weak fine granular structure; loose; many fine fibrous roots; few fine flakes of mica; slightly acid; abrupt smooth boundary.

Bw1—10 to 13 inches; light brown (7.5YR 6/4) sand; single grained; loose; few fine and medium roots; few medium flakes of mica; moderately acid; abrupt smooth boundary.

Bw2—13 to 16 inches; reddish yellow (7.5YR 6/6) loamy fine sand; single grained; loose; few fine and medium roots; few medium flakes of mica; moderately acid; clear wavy boundary.

Bw3—16 to 55 inches; brown (7.5YR 5/4) sand; single grained; loose; few medium flakes of mica; moderately acid; gradual smooth boundary.

C—55 to 72 inches; reddish brown (5YR 5/4) sandy loam; massive; few medium flakes of mica; few fine and medium strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) masses of iron accumulation; very friable; moderately acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Content and size of rock fragments: Layers of gravel in some pedons in the substratum below a depth of 40 inches
Content of plinthite: None
Reaction: Very strongly acid to slightly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6
Texture—sand, loamy sand, or loamy fine sand

Ab horizon (where present, below 40 inches):
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6
Texture—sand, loamy sand, or loamy fine sand

Bw horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sand, loamy sand, or loamy fine sand

C horizon:
Color—hue of 5YR to 2.5Y, value of 3 to 8, and chroma of 3 to 8
Texture—fine sand to a depth of 40 inches; sand to loam or stratified below 40 inches
Mottles (where present)—in shades of gray below a depth of 40 inches; not associated with wetness

Byars Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Depressions and swamps
Landform position: Concave to smooth slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, kaolinitic, thermic Umbric Paleaquults

Commonly Associated Soils

- Dorovan soils, which are in the lower positions and are Histosols
- Grady soils, which are in positions similar to those of the Byars soils or slightly higher, have a thinner surface layer, and are poorly drained

Typical Pedon

Byars sandy loam; from the Official Series Description for the typical pedon located in Marion County, South Carolina; USGS Marion topographic quadrangle; lat. 34 degrees 12 minutes 59.8 seconds N. and long. 79 degrees 24 minutes 36.9 seconds W.

Ap—0 to 9 inches; black (10YR 2/1) sandy loam; weak fine granular structure; friable; common fine roots; very strongly acid; clear smooth boundary.

A—9 to 13 inches; black (10YR 2/1) sandy loam; weak medium subangular blocky structure; firm;

few fine roots; common fine pores; very strongly acid; clear smooth boundary.

Btg1—13 to 21 inches; dark gray (10YR 4/1) clay loam; moderate medium subangular blocky structure; very firm; few fine roots; common fine pores; common distinct clay films on faces of peds; few fine distinct strong brown (7.5YR 5/6) soft masses of iron accumulation along old root channels; very strongly acid; gradual wavy boundary.

Btg2—21 to 43 inches; gray (10YR 5/1) clay; moderate fine subangular blocky structure; very firm; few fine roots; few fine pores; common distinct clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) soft masses of iron accumulation along old root channels; very strongly acid; gradual wavy boundary.

Btg3—43 to 65 inches; about 50 percent dark gray (10YR 4/1) and 50 percent gray (10YR 5/1) clay loam; weak medium subangular blocky structure; very firm; few fine roots; few fine pores; few faint clay films on faces of peds; common fine and medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) soft masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4—65 to 73 inches; about 50 percent dark gray (10YR 4/1) and 50 percent yellowish brown (10YR 5/8) clay; weak medium subangular blocky structure; very firm, very sticky; few fine pores; very strongly acid; clear wavy boundary.

Cg—73 to 80 inches; gray (10YR 5/1) clay loam; massive; very firm, sticky; few fine and medium distinct yellowish brown (10YR 5/6) soft masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Extremely acid to strongly acid throughout

A and Ap horizons:
Color—hue of 10YR, value of 2 or 3, and chroma of 1; or neutral in hue and value of 2 or 3
Texture—sandy loam, fine sandy loam, loam, silt loam, silty clay loam, or clay loam

E horizon (where present):
Color—hue of 10YR, value of 2 or 3, and chroma of 1; or neutral in hue and value of 2 or 3
Texture—sandy clay loam, clay loam, or silty clay loam

Btg horizon:
Color—hue of 10YR, value of 2 to 7, and chroma of 2 or less; or neutral in hue and value of 2 to 7
Texture—clay, sandy clay, clay loam, silty clay loam, or silty clay
Redoximorphic features—few to many iron accumulations in shades of red, brown, and yellow

BCg horizon (where present):
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
Texture—variable, ranging from sandy to clayey
Redoximorphic features—few to many iron accumulations in shades of red and yellow

Cg horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
Texture—variable, ranging from sand to clay
Redoximorphic features—few to many iron accumulations in shades of red and yellow

Cahaba Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy and sandy alluvial sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Slope: 0 to 3 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Annemaine and Wahee soils, which are in the lower positions, have a clayey subsoil, and are moderately well drained and somewhat poorly drained, respectively
- Bigbee and Buncombe soils, which are on natural levees, are sandy throughout, and are excessively drained
- Kenansville soils, which are in the slightly higher positions and are arenic
- Kolomoki soils, which are in positions similar to those of the Cahaba soils and have a clayey subsoil

Typical Pedon

Cahaba sandy loam; from the Official Series Description for the typical pedon located in Wilcox County, Alabama; USGS Lee Long Bridge topographic quadrangle; lat. 37 degrees 04 minutes 07 seconds N. and long. 87 degrees 23 minutes 41 seconds W.

Ap—0 to 5 inches; dark brown (10YR 4/3) sandy loam; weak fine granular structure; very friable; many fine and medium roots; few wormcasts; moderately acid; gradual smooth boundary.
A/B—5 to 9 inches; brown (10YR 4/3) sandy loam (A part) and yellowish red (5YR 4/6) sandy loam (B part); weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.
Bt1—9 to 18 inches; red (2.5YR 4/6) sandy clay loam; weak and moderate medium subangular blocky structure; friable; common fine and few medium roots; few faint clay films on faces of peds and in pores; moderately acid; gradual wavy boundary.
Bt2—18 to 53 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of some peds; sand grains are coated and bridged with clay; very strongly acid; gradual wavy boundary.
C1—53 to 80 inches; yellowish red (5YR 4/6) sandy loam; massive; very friable; few fine roots; common fine flakes of mica; few medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
C2—80 to 90 inches; reddish yellow (7.5YR 6/8) sandy loam; massive; very friable; many fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 36 to 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 2 to 8
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

Bt horizon:
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy clay loam, loam, or clay loam

BC or CB horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 6; or no dominant color and shades of red, brown, and yellow
Texture—sandy loam or fine sandy loam
Redoximorphic features—none to common masses of iron accumulation in shades of yellow and brown

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sand, loamy sand, sandy loam, or fine sandy loam, commonly interbedded and stratified
Redoximorphic features—none to common masses of iron accumulation in shades of yellow and brown and iron depletions in shades of gray

Clarendon Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults

Commonly Associated Soils

- Ardilla soils, which are in the lower positions, have a fragipan, and are somewhat poorly drained
- Dothan soils, which are in the higher positions and are well drained
- Dunbar soils, which are in positions similar to those of the Clarendon soils, have less plinthite, and are somewhat poorly drained
- Goldsboro soils, which are in positions similar to those of the Clarendon soil and have less plinthite
- Pansey soils, which are in the lower positions and are poorly drained
- Varina soils, which are in the slightly higher positions, have a clayey subsoil, and are well drained

Typical Pedon

Clarendon loamy sand (fig. 12); from the Official Series Description for the typical pedon located in Orangeburg County, South Carolina; USGS Felderville topographic quadrangle; lat. 33 degrees 25 minutes 28.1 seconds N. and long. 80 degrees 34 minutes 38.8 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; common fine roots; strongly acid; abrupt smooth boundary.

E—8 to 15 inches; light yellowish brown (10YR 6/4) loamy sand; weak coarse granular structure; very friable; common fine roots; few nodules of ironstone; few medium distinct very dark grayish brown (10YR 3/2) masses; moderately acid; abrupt wavy boundary.

Bt1—15 to 21 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; some of the mottled areas are firm; few fine roots; few faint clay films on faces of peds; few medium faint brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bt2—21 to 27 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; few medium faint gray (10YR 5/1) iron depletions; common medium faint yellowish brown (10YR 5/6) and few medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bt3—27 to 40 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; common faint clay films on faces of peds; 4 percent plinthite occurring as firm irregular nodules 2 to 22 millimeters in size; common medium distinct light gray (10YR 7/1) iron depletions; common coarse prominent yellowish red (5YR 5/6) and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; extremely acid; clear wavy boundary.

Btv—40 to 69 inches; about 33 percent gray (10YR 5/1) and 33 percent yellowish brown (10YR 5/4) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; about 15 percent, by volume, plinthite; many coarse prominent red (2.5YR 5/6) and common medium distinct brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btgv—69 to 80 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; common distinct clay films on faces of most peds; 10 percent plinthite occurring as firm irregular nodules 2 to 50 millimeters in size; many coarse prominent red (2.5YR 5/6), many coarse prominent yellowish red (5YR 5/6), and common coarse distinct yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches

Content and size of rock fragments: 0 to 10 percent, by volume, gravel-sized coarse fragments of ironstone in the A and E horizons and in the upper part of the Bt horizon and 0 to 5 percent in the lower part of the Bt horizon

Content of plinthite: 5 percent or more, starting at a depth of 24 to 60 inches

Reaction: Very strongly acid to slightly acid in the A horizon and extremely acid to strongly acid throughout the rest of the profile

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 or 2. Where value is less than 3.5, the horizon is less than 10 inches thick.

Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or sand

E horizon (where present):

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 to 4

Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or sand

Bt horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam, sandy clay loam, or sandy clay

Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of brown and red

Btv horizon:

Color—10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6; or multicolored in shades of red, yellow, brown, and gray

Texture—sandy loam, sandy clay loam, or sandy clay

Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of yellow, brown, and red

Btvg horizon:

Color—10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy loam, sandy clay loam, or sandy clay

Redoximorphic features—common or many iron accumulations in shades of yellow, brown, and red

BC horizon (where present):
Color—multicolored in shades of red, yellow, brown, and gray
Texture—sandy loam, sandy clay loam, or sandy clay

Cowarts Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Ridges
Landform position: Smooth to convex slopes
Slope: 2 to 12 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Dothan soils, which are on the broader ridges and have 5 percent or more plinthite in the subsoil
- Nankin soils, which are in positions similar to those of the Cowarts soils and have a clayey subsoil

Typical Pedon

Cowarts fine sandy loam, 2 to 5 percent slopes; from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Dothan East topographic quadrangle; lat. 31 degrees 10 minutes 28 seconds N. and long. 85 degrees 21 minutes 26 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; few fine concretions; strongly acid; abrupt wavy boundary.
BE—8 to 12 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium granular structure; very friable; strongly acid; clear wavy boundary.
Bt1—12 to 19 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; sand grains coated and bridged with clay; strongly acid; gradual wavy boundary.
Bt2—19 to 25 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; about 3 percent, by volume, nodules of plinthite; many coarse prominent yellowish red (5YR 5/8) and red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
C—25 to 60 inches; about 34 percent red (10R 5/6), 33 percent yellowish brown (10YR 5/6), and 33 percent light gray (10YR 7/2) sandy clay loam with pockets and strata of coarser and finer textured material; massive; very firm; the areas of red and yellowish brown are iron accumulations, and the areas of gray are iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Content and size of rock fragments: 0 to 30 percent, by volume, iron concretions in the A and E horizons; 0 to 10 percent in the B horizon; and 0 to 15 percent in the C horizon
Content of plinthite: Less than 5 percent, by volume, throughout
Reaction: Very strongly acid or strongly acid throughout
Other features: Some pedons have a 2C horizon of gray clay below a depth of 40 inches.

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 4
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or their gravelly analogues

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or their gravelly analogues

BE horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, sandy clay loam, clay loam, or sandy clay
Redoximorphic features—none to common masses of iron accumulation in shades of yellow, brown, and red

BC horizon (where present):
Color—hue of 10R to 10YR, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of red, brown, yellow, or gray
Texture—sandy loam to sandy clay
Redoximorphic features—few to many masses of

iron accumulation in shades of red, yellow, and brown and few or common iron depletions in shades of gray

C horizon:

Color—hue of 10R to 10YR, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of shades of red, brown, yellow, or gray

Texture—loamy sand to clay; or layered and pocketed with fine and coarse materials

Redoximorphic features—few to many masses of iron accumulation in shades of red, yellow, and brown and few or common iron depletions in shades of gray

Dorovan Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderate
Parent material: Highly decomposed, acid organic materials
Landscape: Coastal Plain
Landform: Swamps and depressions
Landform position: Concave to smooth slopes
Slope: Less than 1 percent
Taxonomic class: Dysic, thermic Typic Haplosaprists

Commonly Associated Soils

• Byars and Grady soils, which are in the slightly higher positions and have a clayey, mineral subsoil
• Plummer soils, which are in the slightly higher positions on the edge of swamps, are poorly drained, and have a sandy, mineral subsoil

Typical Pedon

Dorovan mucky peat; from the Official Series Description for the typical pedon located in George County, Mississippi; USGS Lucedale topographic quadrangle; lat. 30 degrees 53 minutes 14 seconds N. and long. 88 degrees 36 minutes 16 seconds W.

Oe—0 to 3 inches; very dark brown (10YR 2/2) mucky peat consisting of partially decomposed moss, leaves, roots, and twigs; 50 percent fiber after rubbing; slightly sticky; extremely acid; gradual wavy boundary.

Oa1—3 to 11 inches; black (10YR 2/1) muck that remains black (10YR 2/1) when rubbed and pressed; about 30 percent fiber unrubbed and less than 5 percent rubbed; fibers remaining after rubbing are partially decomposed wood 1 to 2 millimeters in size; massive; nonsticky; common roots and partially decomposed limbs; extremely acid; diffuse wavy boundary.

Oa2—11 to 74 inches; black (10YR 2/1) muck that remains black (10YR 2/1) when rubbed and pressed; about 30 percent fiber unrubbed and less than 5 percent rubbed; fibers remaining after rubbing are partially decomposed wood 1 to 2 millimeters in size; massive; nonsticky; few roots; decomposed limbs and twigs; few logs; extremely acid; gradual wavy boundary.

Cg1—74 to 92 inches; very dark grayish brown (10YR 3/2) sand; single grained; nonsticky; few partially decayed small fragments of wood; very strongly acid; gradual wavy boundary.

Cg2—92 to 108 inches; dark grayish brown (10YR 4/2) sand; single grained; nonsticky; few partially decayed small fragments of wood; very strongly acid.

Range in Characteristics

Thickness of organic material: 51 to more than 80 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Extremely acid or very strongly acid in the organic layers and very strongly acid or strongly acid in the C horizons

Oe horizon (where present):

Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3; or neutral in hue and value of 2 to 4

Texture—mucky peat

Oa horizon:

Color—hue of 5YR to 2.5Y, value of 2 or 3, and chroma of 3 or less; or neutral in hue and value of 2 or 3

Texture—muck

Cg horizon:

Color—10YR to 5Y, value of 2 to 5, and chroma of 2 or less; or neutral in hue and value of 2 to 3

Texture—sand, fine sand, loamy sand, sandy loam, fine sandy loam, clay, or their mucky analogues

Dothan Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth slopes
Slope: 0 to 8 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Plinthic Kandiudults

Commonly Associated Soils

- Ardilla soils, which are in the lower positions, have a fragipan, and are somewhat poorly drained
- Clarendon soils, which are in the lower positions and are moderately well drained
- Cowarts soils, which are on the more convex ridges, have a thinner solum than that of the Dothan soils, and are not plinthic
- Fuquay soils, which are in the slightly higher positions and are arenic
- Varina soils, which are in positions similar to those of the Dothan soils and have more clay in the subsoil

Typical Pedon

Dothan loamy sand, 2 to 5 percent slopes (fig. 13); from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Dothan East topographic quadrangle; lat. 31 degrees 12 minutes 51 seconds N. and long. 85 degrees 21 minutes 22 seconds W.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

BE—6 to 13 inches; yellowish brown (10YR 5/6) sandy loam; massive in the upper 2 inches, weak medium subangular blocky structure below; very friable; many fine roots; strongly acid; gradual smooth boundary.

Bt1—13 to 28 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; many fine roots; few faint clay films on faces of peds; strongly acid; diffuse smooth boundary.

Bt2—28 to 33 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; common faint clay films on faces of peds; few plinthite nodules; common medium distinct strong brown (7.5YR 5/8) and yellowish red (5YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btv—33 to 60 inches; about 20 percent yellowish brown (10YR 5/8), 20 percent strong brown (7.5YR 5/8), 20 percent red (2.5YR 4/8), 20 percent yellow (10YR 7/8), and 20 percent very pale brown (10YR 8/2) variegated sandy clay loam; weak medium subangular blocky structure; friable; compact in place; many fine roots; common faint clay films on faces of peds; about 15 percent, by volume, red (2.5YR 4/8) nodules of plinthite; the areas of yellowish brown, strong brown, red, and yellow are areas of iron accumulations, and the areas in shades of very pale brown are iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Content and size of rock fragments: 0 to 5 percent, by volume, ironstone pebbles in the A horizon and the upper part of the B horizon
Content of plinthite: 5 percent or more, starting at a depth of 24 to 60 inches
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loamy fine sand, loamy sand, or sand

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam, fine sandy loam, loamy fine sand, loamy sand, or sand

BE or BA horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8
Texture—fine sandy loam or sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 4 to 8
Texture—fine sandy loam, sandy loam, or sandy clay loam
Redoximorphic features—none to common masses of iron accumulation in shades of brown or red

Btv horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 4 to 8; multicolored in shades of red, yellow, brown, and gray; or, below a depth of 40 inches, matrix hue of 2.5YR to 7.5YR
Texture—dominantly sandy clay loam, but clay loam or sandy clay in some pedons
Redoximorphic features—few to many masses of iron accumulation in shades of brown, yellow, or red and few or common iron depletions in shades of gray

Dunbar Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow

Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, kaolinitic, thermic Aeric Paleaquults

Commonly Associated Soils

- Ardilla soils, which are in positions similar to those of the Dunbar soils and have a fragic horizon
- Clarendon soils, which are in the slightly higher positions, have plinthite in the subsoil, and are moderately well drained
- Goldsboro soils, which are in the slightly higher positions and are moderately well drained
- Grady soils, which are in the lower positions and are poorly drained

Typical Pedon

Dunbar sandy loam; from the Official Series Description for the typical pedon located in Robeson County, North Carolina; USGS Red Springs topographic quadrangle; lat. 34 degrees 46 minutes 12.7 seconds N. and long. 79 degrees 07 minutes 49.5 seconds W.

Ap—0 to 8 inches; dark gray (10YR 4/1) sandy loam; weak medium and fine granular structure; very friable; many fine roots; strongly acid; clear smooth boundary.

Bt—8 to 14 inches; light olive brown (2.5Y 5/4) clay loam; moderate medium subangular blocky structure; hard, firm, plastic and sticky; many fine roots; few fine pores; few faint clay films; few medium distinct dark gray (10YR 4/1) iron depletions; very strongly acid; gradual wavy boundary.

Btg1—14 to 20 inches; grayish brown (2.5Y 5/2) sandy clay; moderate medium subangular blocky structure; firm, hard, plastic and sticky; few fine roots and pores; common distinct clay films on faces of peds; many medium distinct light olive brown (2.5Y 5/4) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.

Btg2—20 to 42 inches; gray (10YR 5/1) sandy clay; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine roots and pores; few faint clay films on faces of peds; common medium distinct yellowish brown (10YR 5/8) and yellowish red (5YR 5/8) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.

Btg3—42 to 62 inches; gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; firm; few fine roots and pores; few faint clay films on faces of peds; few medium distinct yellowish brown (10YR 5/4) and brown (10YR 5/3) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.

Cg—62 to 92 inches; light gray (10YR 7/1) sandy clay that has a few pockets of sandy clay loam; massive; firm; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: None
Content of plinthite: Less than 3 percent throughout
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 or 2. Where value is 3 or less, the horizon is less than 10 inches thick.
Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4; or neutral in hue and value of 4 to 6
Texture—sandy loam, fine sandy loam, or loam

Bt horizon:
Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay, clay loam, or clay
Redoximorphic features—few or common iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, or brown

Btg horizon:
Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4 to 6
Texture—sandy clay, clay loam, or clay
Redoximorphic features—few or common iron accumulations in shades of red, yellow, or brown

BCg horizon (where present):
Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4 to 6
Texture—sandy clay, sandy clay loam, clay loam, or clay
Redoximorphic features—few or common iron accumulations in shades of red, yellow, or brown

Cg horizon:
Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—loamy sand, sandy loam, sandy clay loam, or sandy clay

Faceville Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Slope: 0 to 5 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kandiudults

Commonly Associated Soils

• Nankin soils, which are in more convex positions than those of the Faceville soils and have a thinner solum
• Orangeburg and Red Bay soils, which are in positions similar to those of the Faceville soils and are fine-loamy

Typical Pedon

Faceville fine sandy loam; from the Official Series Description for the typical pedon located in Peach County, Georgia; USGS Warner Robins SW topographic quadrangle; lat. 32 degrees 34 minutes 41 seconds N. and long. 83 degrees 43 minutes 28 seconds W.

Ap—0 to 5 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; common fine and very fine roots; strongly acid; abrupt smooth boundary.
BA—5 to 11 inches; yellowish red (5YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.
Bt1—11 to 28 inches; yellowish red (5YR 5/6) sandy clay; moderate medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; strongly acid; gradual wavy boundary.
Bt2—28 to 34 inches; red (2.5YR 4/6) sandy clay; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; strongly acid; gradual irregular boundary.
Bt3—34 to 60 inches; red (2.5YR 4/6) sandy clay; moderate medium subangular blocky structure; friable; common distinct and prominent clay films on faces of peds; few fine prominent strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; diffuse irregular boundary.
Bt4—60 to 72 inches; about 34 percent dark red (10R 3/6), 33 percent yellowish brown (10YR 5/6), and 33 percent very pale brown (10YR 7/3) sandy clay; strong medium subangular blocky structure; friable; few distinct and prominent clay films on faces of peds; the areas of dark red and yellowish brown are relict and contemporary iron accumulations, and the areas of pale brown are relict and contemporary iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: 0 to 10 percent ironstone nodules 3 to 20 millimeters in size in the surface and subsurface horizons
Content of plinthite: Less than 5 percent below a depth of 40 inches
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 2 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon (where present):
Color—hue of 5YR to 10YR, value of 5 to 7, and chroma of 3 or 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BA horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy clay loam or clay loam

Bt horizon (upper part):
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 4 to 8
Texture—sandy clay, clay loam, or clay

Bt horizon (lower part):
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 4 to 8; or multicolored in shades of red, brown, and yellow
Texture—sandy clay, clay loam, or clay
Redoximorphic features (where present)—none to common relict and contemporary masses of

iron accumulation in shades of brown and yellow and, below a depth of 60 inches, none to common relict and contemporary iron depletions in shades of gray

BC horizon (where present):
Texture—sandy clay loam or sandy clay
Redoximorphic features—none to common relict and contemporary masses of iron accumulation in shades of red, brown, and yellow and none to common relict and contemporary iron depletions in shades of gray

Fuquay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the surface and subsurface layers; moderate in the upper part of the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Broad ridges and hillslopes
Landform position: Smooth and slightly concave slopes
Slope: 0 to 5 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults

Commonly Associated Soils

- Albany and Ocilla soils, which are in the lower positions and are somewhat poorly drained
- Bonifay soils, which are in positions similar to those of the Fuquay soils and are grossarenic
- Dothan soils, which are in the slightly lower positions and are typic
- Pansey soils, which are in the lower depressional positions and on flood plains and are poorly drained

Typical Pedon

Fuquay loamy sand, 0 to 5 percent slopes (fig. 14); from the typical pedon located in Barbour County, Alabama; USGS Louisville topographic quadrangle; lat. 31 degrees 45 minutes 21 seconds N. and long. 85 degrees 30 minutes 58 seconds W.

Ap—0 to 10 inches; brown (10YR 5/3) loamy sand; single grained; loose; few nodules of ironstone; moderately acid; clear smooth boundary.

E1—10 to 22 inches; light yellowish brown (10YR 6/4) loamy sand; common very pale brown (10YR 7/3) clean sand grains; single grained; loose; few nodules of ironstone; moderately acid; clear wavy boundary.

E2—22 to 34 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; few nodules of ironstone; strongly acid; clear wavy boundary.

Bt—34 to 44 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular structure; very friable; few faint clay films on faces of peds; few nodules of ironstone; strongly acid; gradual wavy boundary.

Btv1—44 to 52 inches; about 34 percent yellowish brown (10YR 5/6), 33 percent strong brown (7.5YR 5/6), and 33 percent yellowish red (5YR 5/6) sandy loam; moderate medium subangular structure; friable; few clay films on faces of peds; about 10 percent, by volume, plinthite; the areas of yellowish brown, strong brown, and yellowish red are masses of iron accumulation; strongly acid; gradual wavy boundary.

Btv2—52 to 80 inches; about 30 percent yellowish brown (10YR 5/6), 25 percent strong brown (7.5YR 5/8), 25 percent red (2.5YR 4/8), and 20 percent light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few clay films on faces of peds; about 20 percent, by volume, plinthite; the areas of yellowish brown, strong brown, and red are masses of iron accumulation, and the areas of light brownish gray are iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: 0 to 15 percent, by volume, ironstone fragments throughout
Content of plinthite: 5 percent or more, starting at a depth of 35 to 60 inches
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 to 3; or neutral in hue and value of 4 or 5
Texture—sand, loamy sand, fine sand, loamy fine sand, or their gravelly analogues

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sand, loamy sand, fine sand, loamy fine sand, or their gravelly analogues

BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 8
Texture—loamy sand, sandy loam, or their gravelly analogues

Bt or Btc horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam

Btv horizon:
Color—hue of 10R to 2.5Y, value of 4 to 8, and chroma of 1 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, strong brown, and yellowish brown

C horizon (where present):
Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8; or no dominant color and variegated in shades of yellow, brown, red, and gray
Texture—loamy sand or sandy loam
Redoximorphic features—common or many reticulate and contemporary iron accumulations in shades of red and brown and iron depletions in shades of gray

Goldsboro Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Aquic Paleudults

Commonly Associated Soils

- Ardilla soils, which are in the lower positions, have a fragic horizon, and are somewhat poorly drained
- Clarendon soils, which are in the slightly higher positions and have plinthite in the subsoil
- Dunbar soils, which are in positions similar to those of the Goldsboro soils, are somewhat poorly drained, and have clayey subsoil
- Grady soils, which are in the lower positions, are poorly drained, and have a clayey subsoil

Typical Pedon

Goldsboro loamy sand; from the Official Series Description for the typical pedon located in Wayne County, North Carolina; USGS Goldsboro NE topographic quadrangle; lat. 35 degrees 26 minutes 58.1 seconds N. and long. 77 degrees 57 minutes 30.9 seconds W.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.
E—8 to 12 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.
BE—12 to 15 inches; brownish yellow (10YR 6/6) sandy loam; weak fine subangular blocky structure; friable, slightly sticky; many fine roots; strongly acid; clear smooth boundary.
Bt1—15 to 25 inches; yellowish brown (10YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; common fine roots; sand grains coated and bridged with clay; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—25 to 45 inches; pale brown (10YR 6/3) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; few fine roots; sand grains coated and bridged with clay; few faint clay films on faces of peds; common medium distinct gray (10YR 5/1) iron depletions and yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg—45 to 65 inches; gray (10YR 6/1) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; sand grains coated and bridged with clay; few faint clay films on faces of peds; common medium prominent red (2.5YR 5/6) and common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; gradual irregular boundary.
BCg—65 to 76 inches; gray (10YR 6/1) sandy loam and strata of sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; sand grains coated and bridged with clay; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; common medium faint gray (10YR 5/1) iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: 0 to 5 percent in some pedons
Content of plinthite: 0 to 3 percent throughout

Reaction: Extremely acid to strongly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 1 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam or fine sandy loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy clay loam, sandy loam, loam, or clay loam

Bt horizon (lower part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or no dominant color and multicolored in shades of brown, yellow, red, and gray
Texture—sandy clay loam, sandy loam, loam, clay loam, sandy clay, or clay
Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow, brown, or red

BC horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 5
Texture—sandy loam, fine sandy loam, sandy clay loam, or loam
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of brown or red

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy clay loam, sandy loam, loam, clay loam, sandy clay, or clay
Redoximorphic features—common or many iron accumulations in shades of yellow, brown, or red and iron depletions in shades of gray

BCg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, sandy clay loam, or loam
Redoximorphic features—common or many iron accumulations in shades of yellow, brown, or red and iron depletions in shades of gray

Cg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2
Texture—stratified sandy, loamy, or clayey
Redoximorphic features—few to many iron accumulations in shades of yellow, brown, or red

Grady Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Depressions and swamps
Landform position: Concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Paleaquults

Commonly Associated Soils

• Byars soils, which are in the slightly lower positions and are very poorly drained
• Dorovan soils, which are in the lower positions, are very poorly drained, and are Histosols
• Dunbar soils, which are in the higher positions and are somewhat poorly drained
• Goldsboro soils, which are in the higher positions, have a fine-loamy subsoil, and are moderately well drained

Typical Pedon

Grady sandy loam (fig. 15); from the Official Series Description for the typical pedon located in Miller County, Georgia; USGS Cooktown topographic quadrangle; lat. 31 degrees 11 minutes 03.9 seconds N. and long. 84 degrees 32 minutes 37.1 seconds W.

A—0 to 5 inches; very dark gray (10YR 3/1) sandy loam; weak fine granular structure; very friable; many fine roots; few fine distinct light gray (10YR 7/2) areas of iron depletions; very strongly acid; clear smooth boundary.
BE—5 to 11 inches; grayish brown (2.5Y 5/2) sandy clay loam; pockets of common medium distinct very dark gray (10YR 3/1) loam; weak medium subangular blocky structure; friable; common fine

roots and few medium roots; very strongly acid; clear smooth boundary.

Btg1—11 to 28 inches; gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; few fine roots; common fine pores; common faint clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) and few fine prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Btg2—28 to 62 inches; gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; common fine pores; common faint clay films on faces of peds; many medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Extremely acid to strongly acid throughout

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4
Texture—sandy loam, fine sandy loam, loam, or clay loam

E horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, loam, or clay loam

BE horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4
Texture—sandy clay loam or clay loam

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7
Texture—clay or sandy clay
Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of brown and yellow. In some pedons, below a depth of about 30 inches, the Bt horizon is reticulately mottled in shades of gray, brown, and red.

Henderson Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Smooth to convex side slopes
Slope: 8 to 20 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Paleudults

Commonly Associated Soils

- Nankin soils, which are in positions similar to those of the Henderson soils and do not have silicified limestone fragments
- Springhill soils, which are in the lower positions and are fine-loamy

Typical Pedon

Henderson gravelly sandy loam; from the Official Series Description for the typical pedon located in Randolph County, Georgia; USGS Carnegie topographic quadrangle; lat. 31 degrees 42 minutes 44.3 seconds N. and long. 84 degrees 51 minutes 13.6 seconds W.

A—0 to 4 inches; very dark grayish brown (10YR 3/2) gravelly sandy loam; weak fine granular structure; very friable; many fine roots; about 20 percent, by volume, chert fragments; few stones; strongly acid; clear wavy boundary.

E—4 to 13 inches; yellowish brown (10YR 5/4) gravelly sandy loam; weak fine granular structure; very friable; common medium roots; about 20 percent, by volume, chert fragments; strongly acid; abrupt irregular boundary.

Bt1—13 to 18 inches; strong brown (7.5YR 5/6) gravelly sandy clay; moderate fine subangular blocky structure; friable; common medium roots; about 25 percent, by volume, chert fragments; very strongly acid; abrupt irregular boundary.

Bt2—18 to 33 inches; strong brown (7.5YR 5/6) gravelly clay; strong medium subangular blocky structure; firm; common distinct clay films on surfaces of peds; few large roots; many fragments of chert; common medium distinct yellowish red (5YR 5/6) and reddish brown (2.5YR 4/4) masses of iron accumulation; very strongly acid; gradual irregular boundary.

Bt3—33 to 49 inches; strong brown (7.5YR 5/6) gravelly clay; moderate medium subangular blocky structure; firm; common distinct clay films on faces of peds; many pebbles and fragments of

Figure 12.—A profile of a Clarendon soil, which formed in loamy marine sediments. Clarendon soils are moderately well drained and are very limited as sites for septic systems.

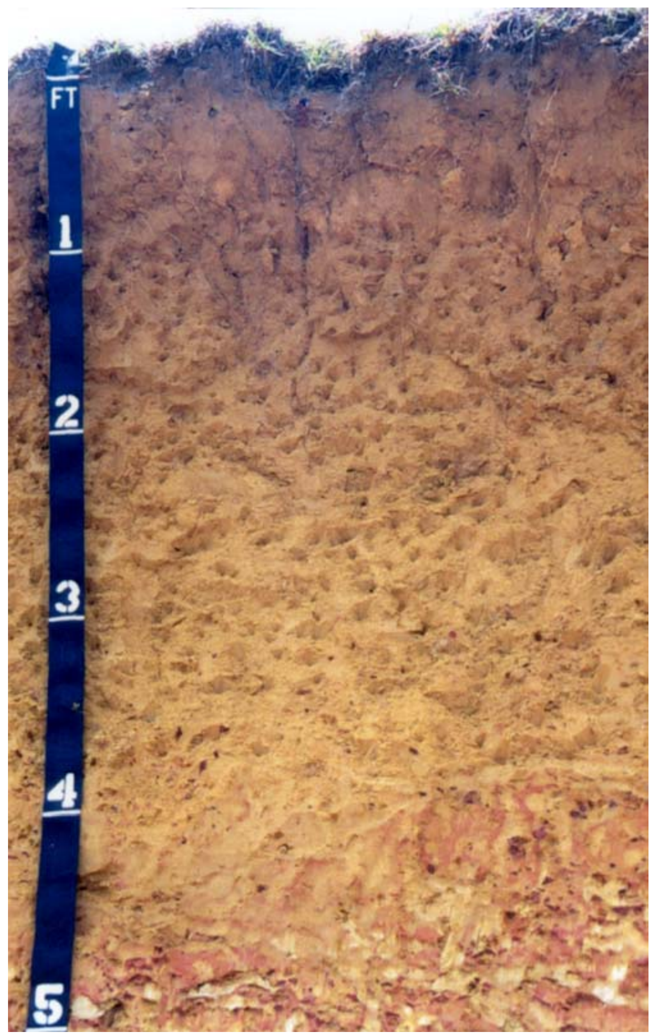

Figure 13.—A profile of a Dothan soil, which formed in loamy marine sediments and contains plinthite at a depth of 3 to 4 feet. Plinthite restricts permeability and creates a perched water table from January through April.

Figure 14.—A profile of a Fuquay soil, which formed in sandy and loamy marine sediments. Fuquay soils are well drained but have a perched water table at a depth of 4 to 6 feet from January through April.

Figure 15.—A profile of a Grady soil, which formed in clayey marine sediments. Grady soils are poorly drained and are frequently ponded from December through April. They are very limited as building sites.

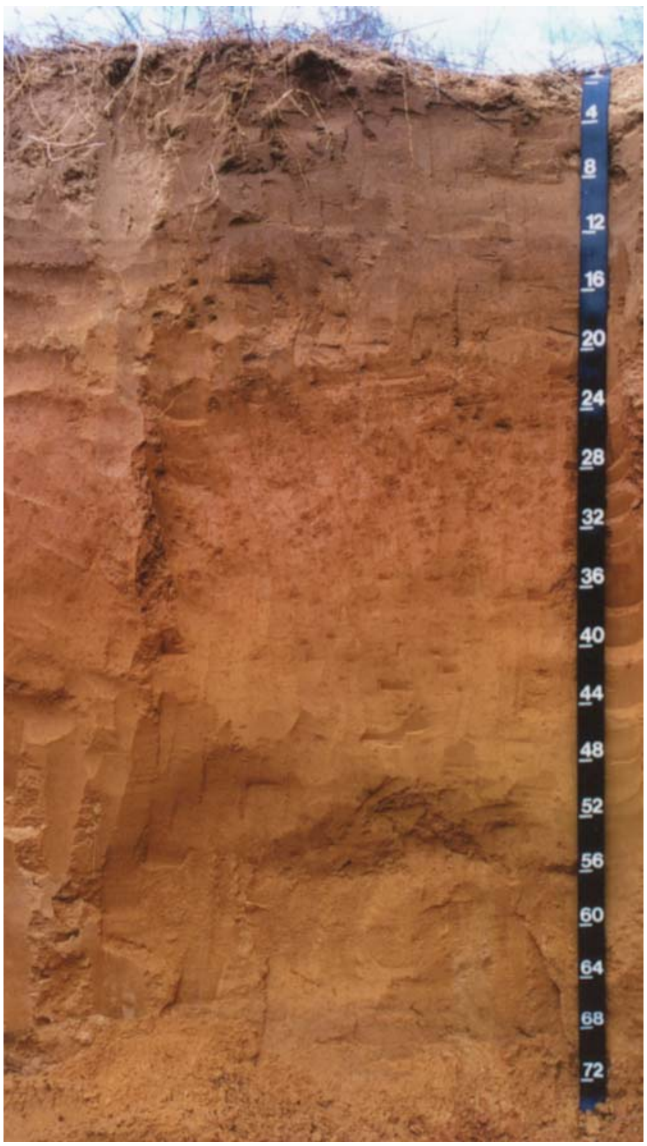

Figure 16.—A profile of a Kolomoki soil, which formed in clayey and loamy alluvial sediments. Kolomoki soils have a site index of 85 for loblolly pine and 75 for longleaf pine.

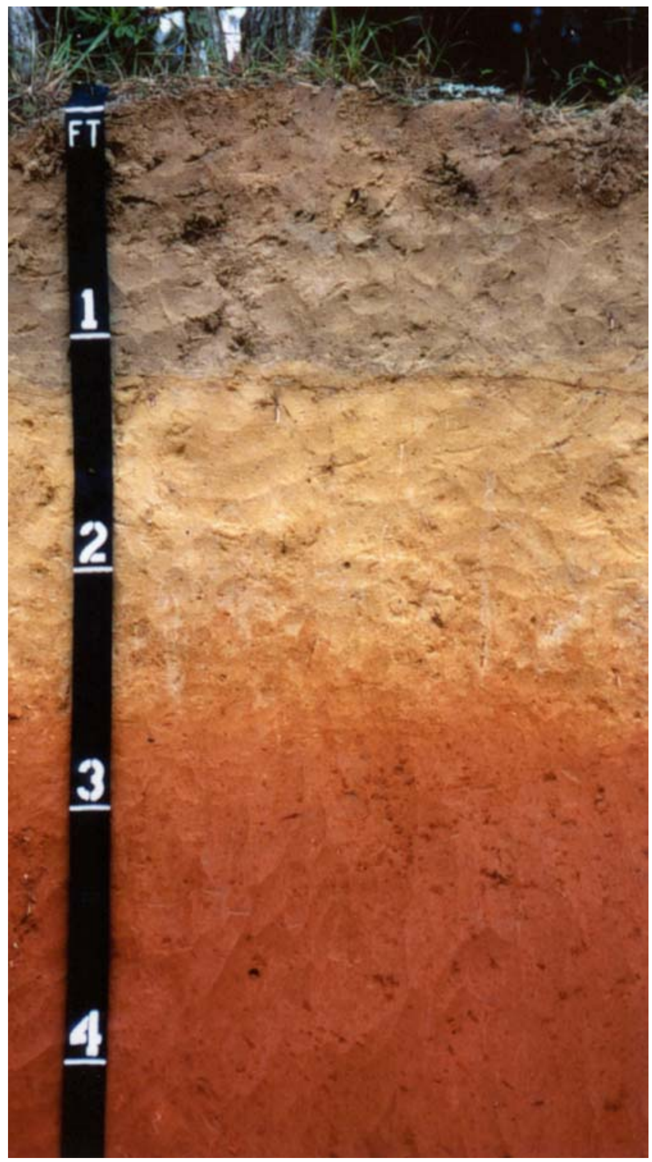

Figure 17.—A profile of a Lucy soil, which formed in sandy and loamy marine sediments. The surface and subsurface layers of the Lucy soils are sand and have a combined thickness ranging from 20 to 40 inches. Lucy soils are a fair source of sand for commercial purposes.

chert; common fine distinct yellowish red (5YR 5/6) and reddish brown (2.5YR 4/4) masses of iron accumulation; very strongly acid; gradual irregular boundary.

Bt4—49 to 65 inches; 34 percent yellowish brown (10YR 5/6), 33 percent light gray (2.5Y 7/2), and 33 percent reddish brown (2.5YR 4/4) gravelly clay; moderate medium and coarse subangular blocky structure; very firm; many pebbles and fragments of chert, few stones; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Content and size of rock fragments: 15 to 50 percent in the A horizon and 15 to 30 percent in the Bt horizons; silicified limestone stones and chert gravel cover 0 to 3 percent of the surface.
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3
Texture—gravelly sandy loam or gravelly loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5, and chroma of 3 to 6
Texture—gravelly sandy loam or gravelly loam

Bt horizon (upper part):
Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6 to 8
Texture—gravelly clay, gravelly sandy clay loam, or gravelly sandy clay
Redoximorphic features—few to many masses of iron accumulation in shades of red, brown, and yellow

Bt horizon (lower part):
Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6 to 8; or, below a depth of 40 inches, no dominant color and multicolored in shades of brown, yellow, red, and gray
Texture—gravelly clay, gravelly sandy clay loam, or gravelly sandy clay
Redoximorphic features—few to many masses of iron accumulation in shades of red, brown, and yellow and, below a depth of 40 inches, few to many iron depletions in shades of gray

Iuka Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Stratified sandy and loamy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth and slightly convex slopes
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents

Commonly Associated Soils

- Kinston soils, which are in the lower positions and are poorly drained
- Mantachie soils, which are in the slightly lower positions and are somewhat poorly drained

Typical Pedon

Iuka fine sandy loam; from the Official Series Description for the typical pedon located in Franklin County, Alabama; USGS Halltown topographic quadrangle; lat. 34 degrees 27 minutes 39.9 seconds N. and long. 88 degrees 06 minutes 28.1 seconds W.

Ap—0 to 7 inches; brown (10YR 4/3) fine sandy loam; weak medium granular structure; friable; moderately acid; abrupt smooth boundary.

A—7 to 13 inches; brown (10YR 5/3) fine sandy loam; single grained; friable; very strongly acid; gradual wavy boundary.

C—13 to 22 inches; light yellowish brown (10YR 6/4) fine sandy loam and few thin strata of loamy sand; massive; friable; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation and grayish brown (10YR 5/2) iron depletions; very strongly acid; gradual wavy boundary.

Cg—22 to 60 inches; about 50 percent gray (10YR 6/1) and 50 percent yellowish brown (10YR 5/4) sandy loam and lenses of loamy fine sand and loam; massive; friable; few soft dark-colored bodies in lower part; the areas of gray are iron depletions, and the areas of yellowish brown are masses of iron accumulation; very strongly acid.

Range in Characteristics

Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A and Ap horizons:
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, loamy sand, silt loam, or loam

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6
Texture—sandy loam, fine sandy loam, loam, or silt loam
Redoximorphic features—few to many iron depletions in shades of gray within a depth of 20 inches

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 to 4
Texture—sandy loam, fine sandy loam, loam, silt loam, or loamy sand
Redoximorphic features—common or many iron accumulations in shades of red, yellow, and brown

Kenansville Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Parent material: Loamy and sandy alluvial sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Arenic Hapludults

Commonly Associated Soils

- Cahaba soils, which are in positions similar to those of the Kenansville soils or slightly lower and are fine-loamy
- Kolomoki soils, which are in positions similar to those of the Kenansville soils or slightly lower and are clayey
- Meggett soils, which are in the lower backswamp positions, have a clayey subsoil, and are poorly drained
- Riverview soils, which are in the lower positions on flood plains, have a fine-loamy control section, and do not have a Bt horizon

Typical Pedon

Kenansville loamy sand; from the Official Series Description for the typical pedon located in Lenoir County, North Carolina; USGS Ayden topographic quadrangle; lat. 35 degrees 24 minutes 14 seconds N. and long. 77 degrees 26 minutes 14 seconds W.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; common fine roots; moderately acid; abrupt smooth boundary.

E—8 to 24 inches; light yellowish brown (10YR 6/4) loamy sand; weak medium granular structure; very friable; few fine roots; moderately acid; gradual wavy boundary.

Bt—24 to 36 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; very friable; common fine roots and pores; sand grains coated and bridged with clay; very strongly acid; gradual wavy boundary.

BC—36 to 42 inches; yellowish brown (10YR 5/8) loamy sand; weak medium granular structure; very friable; few fine roots and pores; clay coatings on sand grains; few bridgings of sand grains by clay; strongly acid; gradual wavy boundary.

C—42 to 84 inches; very pale brown (10YR 7/3) sand; single grained; loose; few fine distinct strong brown (7.5YR 5/6) and common medium faint light gray (10YR 7/2) iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 4. Where value is less than 3.5, the horizon is less than 6 inches thick.
Texture—loamy sand, loamy fine sand, sand, or fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—loamy sand, loamy fine sand, sand, or fine sand

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 3 to 6
Texture—loamy sand, loamy fine sand, or sandy loam

Bt horizon:
Color—hue of 5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—dominantly sandy loam or fine sandy loam. Thin layers of sandy clay loam are in some pedons.

BC horizon (where present):
Color—hue of 5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8

Texture—sand, loamy sand, sandy loam, or fine sandy loam

C horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8

Texture—sand or loamy sand

Kinston Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Stratified loamy and sandy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth to concave slopes
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

- Bibb soils, which are in positions similar to those of the Kinston soils and are coarse-loamy
- Iuka soils, which are in the higher positions and are moderately well drained
- Mantachie soils, which are in the slightly higher positions and are somewhat poorly drained
- Osier soils, which are typically adjacent to the drains and are sandy throughout

Typical Pedon

Kinston loam; from the Official Series Description for the typical pedon located in Wayne County, North Carolina; USGS Northwest Goldsboro topographic quadrangle; lat. 35 degrees 23 minutes 44.6 seconds N. and long. 78 degrees 01 minute 27.8 seconds W.

A—0 to 5 inches; dark gray (10YR 4/1) loam; moderate medium granular structure; friable; many medium and coarse roots; strongly acid; clear wavy boundary.

Ag—5 to 12 inches; gray (10YR 5/1) loam; massive in place, parts to weak medium granular structure; friable, slightly sticky and slightly plastic; many medium and coarse roots; common fine distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Bg—12 to 48 inches; gray (10YR 6/1) clay loam; weak medium subangular blocky structure; firm, slightly sticky and slightly plastic; few medium roots; silt coatings on walls of coarse pores; common fine distinct strong brown (7.5YR 5/6) and common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual smooth boundary.

Cg1—48 to 60 inches; gray (10YR 5/1) clay loam; massive; firm, slightly sticky and slightly plastic; few silt coatings on walls of coarse pores; few fine distinct brown (10YR 4/3) and common medium faint light gray (10YR 7/1) iron depletions; strongly acid; gradual smooth boundary.

Cg2—60 to 72 inches; gray (10YR 5/1) gravelly loamy sand; single grained; very friable; strongly acid.

Range in Characteristics

Thickness of loamy sediments: 40 to 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:

Color—hue of 10YR, value of 2 to 5, and chroma of 1 to 3; or neutral in hue and value of 5. Where value is less than 3.5, the horizon is less than 6 inches thick.

Texture—loamy sand, loam, sandy loam, fine sandy loam, or silt loam

Ag horizon (where present):

Color—hue of 10YR, value of 5, and chroma of 1; or neutral in hue and value of 5

Texture—loamy sand, loam, sandy loam, fine sandy loam, or silt loam

Bg horizon:

Color—hue of 10YR to 5BG, value of 3 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 6

Texture—fine sandy loam, sandy loam, loam, silt loam, clay loam, or sandy clay loam

Redoximorphic features—few or common iron accumulations in shades of brown and yellow

Cg horizon:

Color—hue of 10YR to 5BG, value of 3 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 6

Texture—sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, or their gravelly analogues. The sandy textures in the Cg horizon are commonly below a depth of 40 inches, except for thin lenses in some pedons.

Redoximorphic features—few or common iron accumulations in shades of brown and yellow

Kolomoki Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Clayey and loamy alluvial sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth and slightly convex slopes
Slope: 0 to 3 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Hapludults

Commonly Associated Soils

- Annemaine and Wahee soils, which are in lower terrace positions and are moderately well drained and somewhat poorly drained, respectively
- Bigbee and Buncombe soils, which are in levee positions, are sandy throughout, and are excessively drained
- Cahaba soils, which are in positions similar to those of the Kolomoki soils and have a fine-loamy subsoil
- Kenansville soils, which are in the slightly higher positions and are arenic
- Meggett soils, which are in the lower backswamp positions and are poorly drained
- Riverview soils, which are in lower positions on flood plains and do not have a well developed subsoil

Typical Pedon

Kolomoki fine sandy loam (fig. 16); from the Official Series Description for the typical pedon located in Early County, Georgia; USGS Columbia NE topographic quadrangle; lat. 31 degrees 28 minutes 33.2 seconds N. and long. 85 degrees 03 minutes 52.9 seconds W.

Ap—0 to 8 inches; dark brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; few fine flakes of mica; strongly acid; clear smooth boundary.

Bt1—8 to 28 inches; yellowish red (5YR 4/6) clay; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; common very fine and fine roots; few fine flakes of mica; strongly acid; gradual smooth boundary.

Bt2—28 to 35 inches; yellowish red (5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; sand grains bridged and coated with clay; few fine roots; few fine flakes of mica; very strongly acid; clear wavy boundary.

C1—35 to 42 inches; strong brown (7.5YR 5/6) sandy loam; massive; few very fine roots; common fine flakes of mica; very strongly acid; clear wavy boundary.

C2—42 to 65 inches; strong brown (7.5YR 5/8) sand; single grained; loose; common fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 55 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 or 4
Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

BA or BE horizon (where present):
Color—hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—clay, clay loam, sandy clay loam, or sandy clay
Redoximorphic features—few or common masses of iron accumulation in shades of brown and yellow

BC horizon (where present):
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8
Texture—sandy clay loam or sandy loam

C horizon:
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy clay loam or sandy loam, or, below a depth of 40 inches, loamy sand or sand
Redoximorphic features—few or common masses of iron accumulation in shades of brown and yellow

Lucy Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the surface and subsurface layers; moderate in the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Ridges and hilllslopes
Landform position: Smooth to convex slopes

Slope: 0 to 20 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Kandiudults

Commonly Associated Soils

- Benevolence and Orangeburg soils, which are in the slightly lower positions and are typic
- Nankin soils, which are in the higher positions, are typic, and have a clayey subsoil
- Springhill soils, which are in the higher positions and are typic
- Red Bay soils, which are in the slightly lower positions and are rhodic
- Troup soils, which are in positions similar to those of the Lucy soils and are Grossarenic

Typical Pedon

Lucy loamy sand, 0 to 5 percent slopes (fig. 17); from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Cottonwood topographic quadrangle; lat. 31 degrees 03 minutes 21 seconds N. and long. 85 degrees 14 minutes 35 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; strongly acid; abrupt smooth boundary.
E—8 to 24 inches; strong brown (7.5YR 5/6) loamy sand; weak fine granular structure; very friable; strongly acid; abrupt smooth boundary.
Bt1—24 to 35 inches; yellowish red (5YR 4/8) sandy loam; weak medium subangular blocky structure; very friable; sand grains coated and bridged with clay; strongly acid; clear smooth boundary.
Bt2—35 to 70 inches; red (2.5YR 4/8) sandy clay loam; weak medium subangular blocky structure; friable; common faint clay films on faces of peds; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: Less than 10 percent, by volume, rounded quartz gravel plus ironstone nodules
Content of plinthite: Less than 3 percent throughout
Reaction: Very strongly acid to moderately acid in the A and E horizons, except where limed, and very strongly acid or strongly acid in the subsoil

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 5YR to 10YR, value of 4 to 8, and chroma of 3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

BE horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 to 8. Where hue is 7.5YR or 10YR, the horizon is less than 10 inches thick.
Texture—sandy loam, fine sandy loam, or sandy clay loam.

Bt horizon (lower part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 6 to 8
Texture—sandy clay loam or clay loam, or, below a depth of about 50 inches, sandy clay
Redoximorphic features—none to common masses of iron accumulation in shades of brown or red

Mantachie Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, active, acid, thermic Aeric Endoaquepts

Commonly Associated Soils

- Iuka soils, which are in the higher positions, are coarse-loamy, and are moderately well drained
- Kinston soils, which are in the lower positions and are poorly drained

Typical Pedon

Mantachie loam; from the Official Series Description for the typical pedon located in Lee County, Mississippi; USGS Ratliff topographic quadrangle; lat. 34 degrees 25 minutes 25 seconds N. and long. 88 degrees 36 minutes 51 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; friable; common fine roots; few fine red and brown concretions; common fine distinct dark yellowish brown (10YR 4/4) mottles; slightly acid; abrupt smooth boundary.

A—5 to 11 inches; about 34 percent brown (10YR 4/3), 33 percent grayish brown (10YR 5/2), and 33 percent light yellowish brown (10YR 6/4) fine sandy loam; weak fine granular structure; friable; few fine roots; few fine red concretions; the areas of brown and light yellowish brown are masses of iron accumulation, and the areas of grayish brown are iron depletions; very strongly acid; clear wavy boundary.

Bw1—11 to 15 inches; about 34 percent grayish brown (10YR 5/2), 33 percent brown (10YR 4/3), and 33 percent dark yellowish brown (10YR 4/4) loam; weak fine granular and subangular blocky structure; friable; few fine roots; few fine black (10YR 2/1) and brown (10YR 5/3) concretions; the areas of brown and dark yellowish brown are masses of iron accumulation, and the areas of grayish brown are iron depletions; very strongly acid; clear wavy boundary.

Bw2—15 to 19 inches; about 50 percent gray (10YR 5/1) and 50 percent strong brown (7.5YR 5/6) loam; weak medium subangular blocky structure; friable, slightly plastic; few fine roots; very strongly acid; gradual wavy boundary.

Bg1—19 to 29 inches; gray (10YR 6/1) loam; weak medium subangular blocky structure; friable, slightly plastic; few fine roots; many medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bg2—29 to 48 inches; gray (10YR 5/1) loam; weak medium subangular blocky structure; friable, slightly plastic; few fine roots; many medium distinct strong brown (7.5YR 5/6) and few fine prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bg3—48 to 61 inches; gray (10YR 6/1) loam; weak medium subangular blocky structure; friable, slightly sticky; few fine red (2.5YR 5/6) concretions; many fine and medium distinct strong brown (7.5YR 5/6) and prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 65 inches
Content and size of rock fragments: 0 to 5 percent, by volume, gravel throughout
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A and Ap horizons:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6; or no dominant color and multicolored in shades of brown and gray. Where value is 3.5 or less, the horizon is 10 inches thick or less.
Texture—clay loam, fine sandy loam, loam, sandy loam, or silt loam

Bw horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 6; or no dominant color and multicolored in shades of gray, brown, and yellow
Texture—clay loam, loam, or sandy clay loam
Redoximorphic features (where present)—few to many iron or clay depletions in shades of gray and iron accumulations in shades of brown or yellow

Bg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay loam, loam, or sandy clay loam
Redoximorphic features—few to many iron accumulations in shades of red, brown, or yellow

C horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay loam, loam, or sandy clay loam
Redoximorphic features—few to many iron accumulations in shades of red, brown, or yellow

Meggett Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Clayey marine and alluvial sediments
Landscape: Coastal Plain
Landform: Backswamps
Landform position: Smooth to concave slopes
Slope: 0 to 1 percent
Taxonomic class: Fine, mixed, active, thermic Typic Albaqualfs

Commonly Associated Soils

• Annemaine soils, which are in the slightly higher positions and are moderately well drained

• Kenansville and Kolomoki soils, which are in the higher terrace positions and are well drained
• Wahee soils, which are in the slightly higher positions and are somewhat poorly drained

Typical Pedon

Meggett fine sandy loam; from the Official Series Description for the typical pedon located in Camden County, Georgia; USGS Tarboro topographic quadrangle; lat. 31 degrees 00 minutes 03.6 seconds N. and long. 81 degrees 50 minutes 07.3 seconds W.

A—0 to 5 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable, slightly sticky; many fine and medium roots; strongly acid; clear wavy boundary.

E—5 to 8 inches; gray (10YR 5/1) fine sandy loam; weak fine granular structure; very friable, slightly sticky; many fine and medium roots; common medium prominent yellowish brown (10YR 5/6) soft masses of iron accumulation; strongly acid; abrupt wavy boundary.

Btg1—8 to 16 inches; gray (10YR 5/1) sandy clay; moderate medium angular blocky structure; firm, sticky; few fine roots; few faint clay films along vertical faces of peds; many medium prominent strong brown (7.5YR 5/8) soft masses of iron accumulation; faces of peds are greenish gray (5G 5/1 and 6/1); slightly acid; gradual wavy boundary.

Btg2—16 to 43 inches; gray (10YR 6/1) clay; strong medium angular blocky structure; very firm, very sticky; few fine roots; many prominent clay films on vertical faces of peds; common fragments of shells; many medium prominent strong brown (7.5YR 5/8) soft masses of iron accumulation; peds are coated with greenish gray (5G 5/1 and 5BG 6/1); neutral; gradual wavy boundary.

Btg3—43 to 52 inches; light olive gray (5Y 6/2) clay; moderate medium angular blocky structure; very firm, very sticky; few pockets of sand; few fragments of shells; common distinct clay films on faces of peds; common medium prominent yellowish brown (10YR 5/6) soft masses of iron accumulation and common medium distinct gray (10YR 5/1) iron depletions; neutral; gradual wavy boundary.

BCg—52 to 65 inches; gray (5Y 6/1) sandy clay; weak fine subangular blocky structure; firm, very sticky; few pockets of sandy clay loam; few fragments of shells; few faint clay films on faces of peds; common medium prominent yellowish brown (10YR 5/8) soft masses of iron accumulation; neutral.

Range in Characteristics

Thickness of the solum: 40 to more than 80 inches

Content and size of rock fragments: 0 to 10 percent fine concretions of calcium carbonate or fragments of shells in the Btg horizon and 0 to 35 percent in the BCg horizon

Content of plinthite: None

Reaction: Very strongly acid to slightly acid in the A or Ap horizon, strongly acid to moderately alkaline in the upper part of the B horizon, and slightly acid to moderately alkaline in the lower part of the B horizon and in the BCg and C horizons

A or Ap horizon:

Color—hue of 10YR, value of 2 to 5, and chroma of 1 to 3

Texture—clay loam, loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand

Redoximorphic features—none to many masses of iron accumulation in shades of brown or olive

E or Eg horizon (where present):

Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2

Texture—loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand

Btg horizon:

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; neutral in hue and value of 4 to 7; or no dominant color and multicolored in shades of brown, yellow, olive, and gray

Texture—sandy clay loam (in the upper part), sandy clay, clay loam, or clay

Redoximorphic features—few to many iron accumulations in shades of brown, yellow, and olive

BCg horizon (where present):

Color—hue of 10YR to 5BG, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

Texture—clay, sandy clay, or sandy clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, yellow, and olive

C, Cg, or 2C horizon (where present, below 50 inches):

Color—same range as that of the BCg horizon

Texture—variable or stratified sand to clay

Redoximorphic features—few to many iron accumulations in shades of brown, yellow, and olive

Nankin Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Clayey and loamy marine sediments
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Convex to smooth slopes
Slope: 2 to 20 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Cowarts soils, which are in positions similar to those of the Nankin soils and are fine-loamy
- Faceville soils, which are in positions similar to those of the Nankin soils and have a deeper solum
- Henderson soils, which are in the higher positions and have coarse fragments of silicified limestone throughout
- Lucy soils, which are in the higher positions and are arenic
- Springhill soils, which are in the lower positions and are fine-loamy
- Wicksburg soils, which are in the higher positions, are arenic, and have a clayey subsoil

Typical Pedon

Nankin sandy loam; from the Official Series Description for the typical pedon located in Brooks County, Georgia; USGS Nankin topographic quadrangle; lat. 30 degrees 39 minutes 52 seconds N. and long. 83 degrees 28 minutes 29 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) sandy loam; weak medium granular structure; friable; many fine roots; few nodules of ironstone; strongly acid; clear smooth boundary.

Bt1—8 to 13 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; few nodules of ironstone; few fine discontinuous pores; very few faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—13 to 28 inches; yellowish red (5YR 5/6) sandy clay; moderate medium subangular blocky structure; firm; few fine roots; few fine and very fine discontinuous pores; few faint clay films on faces of peds; few nodules of ironstone; few fine prominent light yellowish brown (10YR 6/4) and red (2.5YR 4/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt3—28 to 38 inches; 34 percent yellowish red (5YR 5/6), 33 percent light yellowish brown (2.5Y 6/4), and 33 percent red (2.5YR 4/6) sandy clay loam; strong medium angular blocky structure parting to moderate medium platy in the lower 3 inches; firm; many prominent clay films on faces of peds; the areas of yellowish red and red are masses of reticulate iron accumulation, and the areas of light yellowish brown are reticulate iron depletions; very strongly acid; abrupt wavy boundary.

BC—38 to 55 inches; 34 percent yellowish red (5YR 5/6), 33 percent light gray (10YR 7/2), and 33 percent weak red (7.5R 4/4) sandy clay loam with few faint pockets and thin strata of very pale brown (10YR 7/4) loamy sand; weak medium subangular blocky structure; firm; few faint clay films on faces of some peds; the areas of yellowish red and weak red are masses of iron accumulation, and the areas of light gray and very pale brown are iron depletions; very strongly acid; gradual wavy boundary.

C—55 to 65 inches; 34 percent red (2.5YR 5/6), 33 percent very pale brown (10YR 7/3), and 33 percent weak red (7.5R 4/4) sandy clay loam; common distinct pockets and thin strata of very pale brown (10YR 7/4) loamy sand; massive; very firm in place, friable when disturbed; the areas of red and weak red are iron accumulations, and the areas of very pale brown are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Content and size of rock fragments: 0 to 25 percent, by volume, nodules or fragments of ironstone in the A and B horizons
Content of plinthite: 0 to 3 percent, by volume, in the Bt horizons
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 1 to 5. Where value is 3.5 or less, the horizon is less than 6 inches thick.
Texture—fine sandy loam, sandy loam, loamy sand, or loamy fine sand

AB or BA horizon (where present):
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, loamy sand, or loamy fine sand

BE horizon (where present):
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam

Bt horizon (upper part):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—clay loam, sandy clay loam, sandy clay, or clay
Redoximorphic features—none to common iron accumulations in shades of red, yellow, and brown

Bt horizon (lower part):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of red, yellow, brown, and, below a depth of 40 inches, gray
Texture—clay loam, sandy clay, or clay
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 to 8; or multicolored in shades of red, yellow, brown, and gray
Texture—sandy loam or sandy clay loam; pockets and thin strata of loamy sand, sandy loam, sandy clay loam, and sandy clay in some pedons
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6; or multicolored in shades of red, yellow, brown, and gray
Texture—sandy loam or sandy clay loam; pockets and thin strata of loamy sand in some pedons
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

Ocilla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Flats
Landform position: Smooth and slightly concave slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

Commonly Associated Soils

- Albany soils, which are in positions similar to those of the Ocilla soils and are grossarenic
- Fuquay soils, which are in the higher positions and are well drained
- Plummer soils, which are in the lower positions, are grossarenic, and are poorly drained

Typical Pedon

Ocilla loamy sand; from the Official Series Description for the typical pedon located in Irwin County, Georgia; USGS Fitzgerald topographic quadrangle; lat. 31 degrees 40 minutes 34.3 seconds N. and long. 83 degrees 20 minutes 16.1 seconds W.

A—0 to 4 inches; very dark gray (10YR 3/1) loamy sand; weak medium granular structure; very friable; many fine roots; strongly acid; clear wavy boundary.
E1—4 to 15 inches; light brownish gray (2.5Y 6/2) loamy sand; single grained; very friable; common fine and medium roots; common root holes filled with very dark gray (10YR 3/1) loamy sand; common clean sand grains; strongly acid; clear irregular boundary.
E2—15 to 28 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; few fine roots; many medium distinct brownish yellow (10YR 6/6) soft masses of iron accumulation; strongly acid; gradual wavy boundary.
Bt1—28 to 49 inches; brownish yellow (10YR 6/6) sandy loam; common medium pockets of sandy clay loam; weak medium subangular blocky structure; very friable; sand grains coated and bridged with clay; common medium prominent light gray (10YR 7/1) iron depletions; very strongly acid; gradual wavy boundary.
Bt2—49 to 59 inches; brownish yellow (10YR 6/6) sandy clay loam with many large pockets of light

gray (10YR 7/1) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; common medium prominent yellowish red (5YR 4/8) soft masses of iron accumulation; very strongly acid; gradual irregular boundary.

Bt3—59 to 67 inches; about 50 percent strong brown (7.5YR 5/6) and 50 percent yellowish red (5YR 4/8) sandy clay loam with common medium pockets of light gray (10YR 7/1) sandy loam; weak coarse angular blocky structure; friable; about 2 percent plinthite; the areas of strong brown and yellowish red are iron accumulations, and the areas of light gray are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: 0 to 5 percent ironstone pebbles in the A and E horizons
Content of plinthite: 0 to 3 percent in the subsoil
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2; or neutral in hue and value of 3 to 5. Where value is 3.5 or less, the horizon is less than 7 inches thick.
Texture—sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 4
Texture—sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand or loamy fine sand

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 to 8
Texture—fine sandy loam, sandy loam, or sandy clay loam

Bt horizon (lower part):
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 8; neutral in hue and value of 7; or no dominant color and multicolored in shades of gray, yellow, brown, and red
Texture—sandy clay loam, coarse sandy loam, sandy loam, fine sandy loam, and sandy clay
Redoximorphic features—few to many masses of iron accumulation in shades of yellow, brown, and red and iron depletions in shades of gray

Btg, BC, or BCg horizon (where present):
Colors—same range as that of the lower Bt horizons
Texture—same range as that of the Bt horizons
Redoximorphic features—few to many masses of iron accumulation in shades of yellow, brown, and red and iron depletions in shades of gray

C horizon (where present):
Colors—same as the lower Bt horizons
Texture—sandy loam, sandy clay loam, sandy clay, or clay
Redoximorphic features—few to many masses of iron accumulation in shades of yellow, brown, and red and iron depletions in shades of gray

Orangeburg Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kandiudults

Commonly Associated Soils

- Faceville soils, which are in positions similar to those of the Orangeburg soils and are clayey
- Lucy soils, which are in the slightly higher positions and are arenic
- Red Bay soils, which are in positions similar to those of the Orangeburg soils and are rhodic

Typical Pedon

Orangeburg loamy sand; from the Official Series Description for the typical pedon located in Dougherty County, Georgia; USGS Putney topographic quadrangle; lat. 31 degrees 29 minutes 07 seconds N. and long. 84 degrees 04 minutes 20 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; very friable; many fine and medium roots; strongly acid; clear smooth boundary.

BA—7 to 12 inches; strong brown (7.5YR 5/6) sandy loam; weak fine subangular blocky structure; very friable; many fine roots; sand grains bridged and coated with clay; very strongly acid; clear smooth boundary.

Bt1—12 to 54 inches; yellowish red (5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; many fine roots; many fine pores; common distinct clay films on faces of peds; very strongly acid; gradual smooth boundary.

Bt2—54 to 72 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; few fine distinct yellowish brown (10YR 5/6) masses of relic iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 70 to 120 inches
Content and size of rock fragments: 0 to 10 percent, by volume, ironstone nodules throughout
Content of plinthite: None
Reaction: Very strongly acid to moderately acid in the A horizon and the upper part of the Bt horizon and very strongly acid or strongly acid in the lower part of the Bt horizon

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6
Texture—sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam

E horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 6
Texture—sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8. Where hue is 7.5YR, the horizon is less than 10 inches thick.
Texture—sandy clay loam or sandy clay

Bt horizon (lower part):
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy clay loam or sandy clay
Relic redoximorphic features—iron accumulations in shades of brown

BC horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy loam, sandy clay loam, or sandy clay
Relic redoximorphic features—none to many iron accumulations in shades of brown

Osier Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Rapid
Parent material: Sandy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth and slightly concave slopes
Slope: 0 to 1 percent
Taxonomic class: Siliceous, thermic Typic Psammaquents

Commonly Associated Soils

- Bibb soils, which are in positions similar to those of the Osier soils and are coarse-loamy
- Kinston soils, which are fine-loamy and are in concave positions that are more distant than the Osier soils from the drain

Typical Pedon

Osier loamy fine sand; from the Official Series Description for the typical pedon located in Irwin County, Georgia; USGS Ocilla West topographic quadrangle; lat. 31 degrees 30 minutes 53.5 seconds N. and long. 83 degrees 15 minutes 34.4 seconds W.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) loamy fine sand; moderate fine granular structure; very friable; many fine and coarse roots; very strongly acid; abrupt wavy boundary.

A2—3 to 8 inches; about 50 percent dark gray (10YR 4/1) and 50 percent grayish brown (2.5Y 5/2) loamy sand; weak medium granular structure; very friable; common fine and coarse roots; thin strata of sand; very strongly acid; clear wavy boundary.

Cg1—8 to 16 inches; dark gray (10YR 4/1) loamy sand; weak fine granular structure; very friable; common fine roots; thin strata of gray (10YR 6/1) sand; very strongly acid; gradual wavy boundary.

Cg2—16 to 36 inches; gray (10YR 6/1) sand; single grained; loose; few fine roots; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Cg3—36 to 48 inches; light brownish gray (2.5Y 6/2) sand; single grained; loose; few fine roots; common coarse distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Cg4—48 to 60 inches; light gray (2.5Y 7/2) coarse sand; single grained; loose; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; common medium faint light brownish gray (2.5Y 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Cg5—60 to 75 inches; dark gray (10YR 4/1) coarse sand; single grained; loose; many coarse faint light brownish gray (10YR 6/2) iron depletions; very strongly acid.

Range in Characteristics

Content and size of rock fragments: None
Content of plinthite: None
Reaction: Extremely acid to moderately acid throughout

A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2. Where value is 3.5 or less, the horizon is less than 10 inches thick.
Texture—fine sandy loam, loamy fine sand, loamy sand, fine sand, or sand

Cg horizon:
Color—hue of 7.5YR to 5GY, value of 3 to 8, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—loamy fine sand, loamy sand, fine sand, or sand or, in the lower part of the Cg horizons, coarse sand. Most pedons have thin strata of material ranging from sand to sandy loam.
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron accumulations in shades of brown or yellow

Ab horizon (where present):
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2
Texture—fine sand, loamy fine sand, or loamy sand

Pansey Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Loamy marine and alluvial sediments
Landscape: Coastal Plain
Landform: Depressions and flood plains
Landform position: Smooth to concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Plinthic Paleaquults

Commonly Associated Soils

- Ardilla soils, which are in the slightly higher positions and are somewhat poorly drained
- Clarendon soils, which are in the higher positions and are moderately well drained
- Fuquay soils, which are in the higher positions, are well drained, and are arenic
- Troup soils, which are in the higher positions, are well drained, and are grossarenic

Typical Pedon

Pansey fine sandy loam, 0 to 2 percent slopes, occasionally flooded; from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Cottonwood topographic quadrangle; lat. 31 degrees 04 minutes 34.4 seconds N. and long. 85 degrees 16 minutes 34.7 seconds W.

A—0 to 5 inches; very dark gray (N 3/0) fine sandy loam; weak fine granular structure; very friable; strongly acid; clear smooth boundary.

E—5 to 10 inches; gray (10YR 5/1) fine sandy loam; weak fine granular structure; very friable; strongly acid; clear smooth boundary.

Bg—10 to 20 inches; light gray (10YR 6/1) sandy loam; weak medium subangular blocky structure; very friable; sand grains coated and bridged with clay; few fine distinct olive yellow (2.5Y 6/8) masses of iron accumulation; strongly acid; gradual smooth boundary.

Btg—20 to 35 inches; light gray (N 7/0) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on vertical and horizontal faces of peds; many medium distinct olive yellow (2.5Y 6/6) and few medium prominent red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual smooth boundary.

Btv—35 to 70 inches; about 34 percent light gray (N 7/0), 33 percent red (2.5YR 4/8), and 33 percent yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable, firm and compact in 25 percent of the volume around plinthite nodules; 10 to 15 percent, by volume, plinthite nodules; common distinct clay films on vertical and horizontal faces of most peds; the areas of light gray are iron depletions, and the red and yellowish brown areas are iron accumulations; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: None
Content of plinthite: 5 percent or more, starting at a depth of 30 to 60 inches
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4
Texture—fine sandy loam, sandy loam, loamy sand, or loamy fine sand

E horizon (where present):
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
Texture—fine sandy loam, sandy loam, loamy sand, or loamy fine sand

Bg horizon (where present):
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of iron accumulations in shades of yellow, brown, and red

Btg horizon:
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—sandy clay loam
Redoximorphic features—common or many masses of iron accumulations in shades of yellow, brown, and red

Btv horizon:
Color—similar range to that of the Btg horizon; or no dominant color and multicolored in shades of gray, brown, yellow, and red
Texture—sandy clay loam or sandy clay
Redoximorphic features—common or many masses of iron accumulations in shades of yellow, brown, and red

Plummer Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Rapid in the surface and subsurface layers; moderate in the subsoil
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Flats and depressions
Landform position: Smooth to concave slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

Commonly Associated Soils

- Albany and Ocilla soils, which are in the slightly higher positions and are somewhat poorly drained
- Bonifay and Troup soils, which are in the higher positions and are well drained
- Dorovan soils, which are in the lower positions, are very poorly drained, and are Histosols

Typical Pedon

Plummer sand; from the Official Series Description for the typical pedon located in Wayne County, Georgia; USGS Mannington topographic quadrangle; lat. 31 degrees 27 minutes 50.5 seconds N. and long. 81 degrees 47 minutes 57.8 seconds W.

A—0 to 9 inches; dark gray (N 4/0) sand; weak fine granular structure; very friable; many medium and fine roots; many clean sand grains in the lower part; very strongly acid; clear wavy boundary.
Eg1—9 to 28 inches; gray (5Y 6/1) sand; single grained; loose; few roots in the upper part; common root holes with brown (10YR 4/3) stains; very strongly acid; gradual wavy boundary.
Eg2—28 to 50 inches; light gray (5Y 7/1) sand; single grained; loose; very strongly acid; gradual irregular boundary.
Btg—50 to 72 inches; light gray (5Y 7/1) sandy loam with bodies of sandy clay loam; weak medium granular and subangular blocky structure; friable; sand grains bridged with clay; common medium and fine prominent yellowish brown (10YR 5/6) soft masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 72 to more than 100 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Extremely acid to strongly acid throughout
Other features: Some pedons have an O horizon, which is 8 inches thick or less

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2; or neutral in hue and value of 2 to 4. Where value is 3.5 or less, the horizon is less than 8 inches thick.
Texture—sand, fine sand, loamy fine sand, or loamy sand

Eg horizon:
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 or 2; or neutral in hue and value of 5 to 8
Texture—sand, fine sand, loamy fine sand, or loamy sand
Redoximorphic features—none to common iron accumulations in shades of brown or yellow

BEg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—sand, fine sand, loamy fine sand, or loamy sand
Redoximorphic features—none to common iron accumulations in shades of brown or yellow

Btg horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7
Texture—sandy loam, fine sandy loam, or sandy clay loam, and, in some pedons, pockets of loamy sand and sandy clay
Redoximorphic features—none to many iron accumulations in shades of red, brown, or yellow

Red Bay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Slope: 0 to 8 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Rhodic Kandiudults

Commonly Associated Soils

- Benevolence soils, which are in positions similar to those of the Red Bay soils and are coarse-loamy
- Faceville soils, which are in positions similar to those of the Red Bay soils and are clayey
- Lucy soils, which are in the slightly higher positions and are arenic
- Orangeburg soils, which are in positions similar to those of the Red Bay soils and are typic

Typical Pedon

Red Bay sandy loam, 0 to 2 percent slopes; from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Malvern topographic quadrangle; lat. 31 degrees 13 minutes 11 seconds N. and long. 85 degrees 30 minutes 12 seconds W.

Ap—0 to 6 inches; dark reddish brown (5YR 3/4) sandy loam; weak fine granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.
Bt1—6 to 20 inches; dark red (2.5YR 3/6) sandy loam; weak medium subangular blocky structure; very friable; common fine roots; sand grains coated and bridged with clay; moderately acid; gradual smooth boundary.
Bt2—20 to 52 inches; dark red (10R 3/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; sand grains coated and bridged with clay; strongly acid; diffuse smooth boundary.
Bt3—52 to 72 inches; dark red (2.5YR 3/6) sandy clay loam; weak medium subangular blocky structure; very friable; few faint clay films on faces of peds; sand grains coated and bridged with clay; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid in the upper part of the solum and very strongly acid or strongly acid in the lower part of the solum

A or Ap horizon:
Color—hue of 2.5YR to 7.5YR, value of 3 or 4, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, loam, or sandy clay loam

BA or BE horizon (where present):
Color—hue of 10R to 5YR, value of 3 or 4, and chroma of 4 to 6
Thickness—less than 10 inches
Texture—sandy loam or sandy clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 3, and chroma of 4 to 6
Texture—sandy loam or sandy clay loam

Riverview Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate

Parent material: Loamy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Smooth and slightly convex slopes
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, mixed, active, thermic Fluventic Dystrudepts

Commonly Associated Soils

- Buncombe and Bigbee soils, which are in the higher positions on levees and are sandy throughout
- Kenansville soils, which are in the higher positions on terraces, are arenic, and have a well developed subsoil
- Kolomoki soils, which are in the higher positions on terraces, are typic, and have a well developed subsoil

Typical Pedon

Riverview silt loam; from the Official Series Description for the typical pedon located in Escambia County, Alabama; USGS Roberts topographic quadrangle; lat. 31 degrees 04 minutes 37.1 seconds N. and long. 86 degrees 58 minutes 29.4 seconds W.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam; weak medium granular structure; friable; many fine roots; strongly acid; clear wavy boundary.

Bw1—6 to 12 inches; dark yellowish brown (10YR 3/4) loam; weak medium subangular blocky structure; friable; many fine roots; very strongly acid; gradual wavy boundary.

Bw2—12 to 23 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; brown (7.5YR 5/4) faces of peds; few flakes of mica; very strongly acid; gradual wavy boundary.

Bw3—23 to 31 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; brown (7.5YR 5/4) faces of peds; common flakes of mica; strongly acid; gradual wavy boundary.

BC—31 to 39 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few spots of uncoated sand grains; common flakes of mica; few fine distinct yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

C—39 to 70 inches; brownish yellow (10YR 6/6) loamy fine sand; single grained; loose; few thin strata of darker, finer textured material; common flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 24 to 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to slightly acid in the upper part of the solum and very strongly acid to moderately acid in the lower part of the solum

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 6. Where the value is 3.5 or less, the horizon is less than 7 inches thick.
Texture—very fine sandy loam, loam, silt loam, fine sandy loam, sandy loam, loamy fine sand, or loamy sand

Ab horizon (where present):
The Ab horizon has the same range in color and texture as the A horizon.

Bw horizon:
Color—hue of 5YR or 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—clay loam, sandy clay loam, loam, fine sandy loam, silt loam, or silty clay loam
Redoximorphic features—none to common iron accumulations in shades of yellow, brown, or red

BC horizon (where present):
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 6
Texture—sandy clay loam, loam, sandy loam, or fine sandy loam
Redoximorphic features—none to common iron or clay depletions in shades of gray below a depth of 24 inches and iron accumulations in shades of yellow, brown, or red

C horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 4 to 8
Texture—loam, fine sandy loam, sandy loam, loamy fine sand, loamy sand, or sand. Most pedons have strata of finer or coarser textured material.
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron accumulations in shades of yellow, brown, or red

Springhill Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Hillslopes
Landform position: Smooth and slightly convex slopes

Slope: 8 to 20 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

• Henderson soils, which are in the higher positions and have a higher content of coarse fragments of silicified limestone than the Springhill soils
• Lucy soils, which are in the higher positions and are arenic
• Nankin soils, which are in the higher positions and are clayey

Typical Pedon

Springhill sandy loam; from the Official Series Description for the typical pedon located in Pike County, Alabama; USGS Banks topographic quadrangle; lat. 31 degrees 48 minutes 21.9 seconds N. and long. 85 degrees 48 minutes 14.5 seconds W.

Ap—0 to 5 inches; brown (7.5YR 5/4) sandy loam; weak fine granular structure; very friable; common fine and few medium roots; strongly acid; clear smooth boundary.
BA—5 to 11 inches; yellowish red (5YR 4/6) sandy loam; weak medium subangular blocky structure; very friable; few fine and medium roots; strongly acid; clear wavy boundary.
Bt1—11 to 30 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of most peds; strongly acid; gradual wavy boundary.
Bt2—30 to 45 inches; red (2.5YR 4/8) sandy clay loam; moderate medium subangular blocky structure; friable; few medium roots; few faint clay films on faces of some peds; most sand grains are coated and bridged with clay; strongly acid; gradual wavy boundary.
Bt3—45 to 72 inches; red (2.5YR 5/6) sandy loam; weak coarse subangular blocky structure; friable; few sand grains coated and bridged with clay; few pockets of clean sand grains; about 2 percent, by volume, rounded quartz gravel 1/4-inch in diameter; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Content and size of rock fragments: Up to 15 percent, by volume, ironstone channers and/or rounded quartz gravel
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—dominantly hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4; eroded areas may have hue of 2.5YR or 5YR, value of 3 to 5, and chroma of 3 to 6; where value is 3.5 or less, the horizon is less than 7 inches thick.
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam, and, in eroded areas, sandy clay loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—loamy fine sand, loamy sand, sandy loam, or fine sandy loam

BA or BE horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam (6 inches or less thick) or sandy clay loam

Bt horizon (lower part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—none to common iron accumulations in shades of yellow, red, and brown

BC horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or, rarely, loamy sand
Redoximorphic features—none to common iron accumulations in shades of yellow, red, and brown

C horizon (where present):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8; or no dominant color and multicolored in shades of red, yellow, and brown
Texture—loamy sand, loamy fine sand, or sand
Redoximorphic features—few to many iron accumulations in shades of yellow, red, and brown

Troup Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid in the surface and subsurface layers; moderate in the subsoil

Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Smooth to convex slopes
Slope: 0 to 20 percent
Taxonomic class: Loamy, kaolinitic, thermic Grossarenic Kandiudults

Commonly Associated Soils

- Benevolence soils, which are in the slightly lower positions and are coarse-loamy
- Bonifay soils, which are in the lower positions, have a perched water table, and have a yellow subsoil that contains plinthite
- Lucy soils, which are in positions similar to those of the Troup soil and are arenic
- Pansey soils, which are poorly drained and are in the lower positions on flood plains and in depressions
- Plummer soils, which are in the lower positions and are poorly drained
- Wicksburg soils, which are in the slightly lower positions and are arenic and clayey

Typical Pedon

Troup loamy sand; from the typical pedon located in Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 07 minutes 06 seconds N. and long. 85 degrees 22 minutes 48 seconds W.

A—0 to 2 inches; very dark grayish brown (10YR 3/2) loamy sand; single grained; loose; strongly acid; clear smooth boundary.

E1—2 to 23 inches; light yellowish brown (10YR 6/4) loamy sand; single grained; loose; strongly acid; clear wavy boundary.

E2—23 to 39 inches; very pale brown (10YR 7/4) fine sand; single grained; loose; very strongly acid; gradual smooth boundary.

E3—39 to 54 inches; very pale brown (10YR 7/4) fine sand with pockets of very pale brown (10YR 8/3) clean sand; single grained; loose; common medium distinct yellowish brown (10YR 5/6) streaks; very strongly acid; clear wavy boundary.

Bt—54 to 80 inches; yellowish red (5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few medium red (2.5YR 5/8) streaks on faces of peds; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 80 inches
Content and size of rock fragments: Up to 10 percent, by volume, quartz gravel and ironstone nodules
Content of plinthite: None
Reaction: Very strongly acid to moderately acid in the surface and subsurface layers and very strongly acid or strongly acid in the subsoil

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 2 to 4
Texture—coarse sand, sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 5YR to 10YR, value of 4 to 8, and chroma of 3 to 8
Texture—coarse sand, sand, fine sand, loamy sand, or loamy fine sand

BE horizon (where present):
Color—hue of 5YR to 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 10R to 5YR, value of 4 to 7, and chroma of 4 to 8; or hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam, and, below the control section, clay loam or sandy clay

BC or C horizon (where present):
Color—similar range to that of the Bt horizon; or no dominant color and multicolored in shades of red, yellow, and brown
Texture—similar range to that of the Bt horizon
Redoximorphic features—none to common iron accumulations in shades of red, yellow, or brown

Varina Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Broad ridges
Landform position: Smooth and slightly convex slopes
Slope: 2 to 5 percent
Taxonomic class: Fine, kaolinitic, thermic Plinthic Paleudults

Commonly Associated Soils

- Clarendon soils, which are in lower positions on footslopes and are moderately well drained

• Dothan soils, which are in positions similar to those of the Varina soils and have less clay in the subsoil

Typical Pedon

Varina sandy loam; from the Official Series Description for the typical pedon located in Johnston County, North Carolina; USGS Benson topographic quadrangle; lat. 35 degrees 26 minutes 24.6 seconds N. and long. 78 degrees 33 minutes 49.1 seconds W.

Ap—0 to 7 inches; grayish brown (2.5Y 5/2) sandy loam; common coarse pale yellow (2.5Y 7/4) inclusions of material from the E horizon; weak fine granular structure; very friable; about 2 percent, by volume, spherical, rough-surfaced nodules of ironstone 1/4 inch in diameter; moderately acid; abrupt wavy boundary.

E—7 to 14 inches; pale yellow (2.5Y 7/4) loamy sand; single grained; loose; about 1 percent, by volume, spherical nodules of ironstone less than 1/4 inch in diameter; strongly acid; abrupt wavy boundary.

BE—14 to 18 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak medium subangular blocky structure; friable; fine and medium pores; about 1 percent, by volume, smooth-surfaced nodules of ironstone; about 2 percent, by volume, quartz pebbles; strongly acid; clear smooth boundary.

Bt1—18 to 26 inches; yellowish brown (10YR 5/6) sandy clay; weak medium subangular blocky structure; friable, sticky; common fine and medium pores; about 1 percent, by volume, smooth-surfaced nodules of ironstone less than 1/4 inch in diameter; about 2 percent, by volume, quartz pebbles; very strongly acid; clear smooth boundary.

Bt2—26 to 32 inches; brownish yellow (10YR 6/6) sandy clay; weak medium subangular blocky structure; friable, sticky; few faint clay films on faces of peds; about 1 percent, by volume, plinthite; about 1 percent, by volume, smooth-surfaced nodules of ironstone; about 2 percent, by volume, quartz pebbles; very strongly acid; clear smooth boundary.

Bt3—32 to 38 inches; brownish yellow (10YR 6/6) sandy clay; weak medium subangular blocky structure; friable, sticky; few faint clay films on faces of peds; few faint red (2.5YR 5/6) masses of iron accumulation; about 1 percent, by volume, nodules of ironstone 1/4 to 1/2 inch in diameter; about 2 percent, by volume, quartz pebbles; very strongly acid; clear smooth boundary.

Btv1—38 to 57 inches; about 50 percent yellowish brown (10YR 5/6) and 50 percent brownish yellow (10YR 6/6) sandy clay; common medium and coarse red (2.5YR 4/8) nodules; few or common pale yellow (10YR 8/2) to light gray (10YR 7/1) tongues 1/2 inch in diameter forming a reticulated pattern with the red material; massive; friable, except the red material is slightly hard and brittle; few faint clay films on red (2.5YR 5/6) nodules; few hard nodules of ironstone; few fine quartz pebbles; the areas of yellowish brown, brownish yellow, and red are areas of iron accumulation, and the areas of pale yellow and light gray are relict iron depletions; very strongly acid; gradual smooth boundary.

Btv2—57 to 67 inches; about 34 percent red (2.5YR 4/8), 33 percent yellow (10YR 7/8), and 33 percent pale yellow (2.5Y 8/2); red materials tend to be horizontally oriented and are bordered by yellow materials; white materials in vertical and horizontal bands make up about 30 percent of the volume; variegated sandy clay with red parts that are sandy clay loam and white parts that are sandy clay; weak coarse platy structure; red parts are hard and brittle; white parts are firm; common faint clay films in yellow and white parts; 1 percent, by volume, nodules of ironstone; about 2 percent, by volume, quartz pebbles; the areas of red and yellow are masses of iron accumulation, and the areas of pale yellow are iron depletions; very strongly acid; gradual smooth boundary.

Btv3—67 to 81 inches; about 34 percent pale yellow (2.5Y 8/2), 33 percent red (2.5YR 4/8), and 33 percent yellow (10YR 7/8) reticulated sandy clay; very pale brown parts are finer textured than the red parts; weak coarse platy structure; friable; local zones of white materials are slightly brittle; common faint clay films in white and yellow parts; about 2 percent, by volume, quartz pebbles; the areas of red and yellow are iron accumulations, and the areas of very pale brown are iron depletions; very strongly acid; gradual smooth boundary.

BC—81 to 100 inches; about 34 percent red (2.5YR 4/8), 33 percent yellow (10YR 7/8), and 33 percent white (2.5Y 8/2) sandy clay loam (average texture), ranges from sandy loam in the red parts to sandy clay in the white parts; weak coarse platy structure; friable; common faint clay films along borders of white parts; about 2 percent, by volume, quartz pebbles; the areas of red and yellow are iron accumulations, and the areas of white are iron depletions; very strongly acid; gradual wavy boundary.

C—100 to 118 inches; about 50 percent yellow (10YR 7/8) and 50 percent white (10YR 8/2) sandy clay loam; few variegated lenses of sandy loam and sandy clay; massive; friable; about 10 percent, by volume, quartz pebbles; common fine and medium soft red (2.5YR 4/8) nodules; the areas of red and yellow are iron accumulations, and the areas of white are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: 0 to 5 percent, by volume, ironstone nodules in the upper part; 0 to 30 percent quartz pebbles in the upper part; and 0 to 15 percent quartz pebbles in the lower part
Content of plinthite: 5 percent or more, starting at a depth of 36 to 60 inches
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 to 3
Texture—loamy sand or sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand or sandy loam

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy clay loam or sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy clay, clay loam, or clay
Redoximorphic features—none to common iron accumulations in shades of red, brown, and yellow

Btv horizon:
Color—hue of 10R to 2.5Y, value of 4 to 8, and chroma of 1 to 8; or no dominant color and variegated or reticulated pattern in shades of red, yellow, brown, or gray
Texture—sandy clay, clay loam, or clay
Redoximorphic features—common or many iron or clay depletions in shades of gray and white and iron accumulations in shades of red, brown, and yellow

BC horizon:
Color—typically, similar in range to that of the Btv horizon
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

C horizon:
Color—variegated in shades of red, yellow, brown, and gray
Texture—sandy clay loam with lenses of sandy loam and sandy clay
Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

Wahee Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Clayey alluvial and marine sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Smooth to concave slopes
Slope: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aeric Endoaquults

Commonly Associated Soils

- Annemaine soil, which are in the slightly higher positions and are moderately well drained
- Bigbee soils, which are in the slightly higher positions along drainageways, are excessively drained, and are sandy throughout
- Cahaba soils, which are in the higher positions, are well drained, and are fine-loamy
- Kolomoki soils, which are in the higher positions and are well drained
- Meggett soils, which are in the lower positions in backswamps and are poorly drained

Typical Pedon

Wahee fine sandy loam; from the Official Series Description for the typical pedon located in Horry County, South Carolina; USGS Myrtle Beach topographic quadrangle; lat. 33 degrees 42 minutes 12.1 seconds N. and long. 78 degrees 55 minutes 59.3 seconds W.

A—0 to 7 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; many fine and medium roots; few fine holes and pores; very strongly acid; clear smooth boundary.
E—7 to 11 inches; pale brown (10YR 6/3) sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; few fine

holes and pores; few fine faint light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear smooth boundary.

Bt—11 to 15 inches; light olive brown (2.5Y 5/3) clay loam; moderate medium subangular blocky structure; firm, sticky and very plastic; common distinct clay films on faces of peds; common fine roots; few fine holes and pores; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation; few fine faint light brownish gray (10YR 6/2) iron depletions; strongly acid; clear wavy boundary.

Btg1—15 to 30 inches; grayish brown (2.5Y 5/2) clay loam; strong medium subangular blocky structure; firm, sticky and very plastic; common distinct clay films on faces of peds; common fine and few medium roots; few fine holes and pores; common medium prominent reddish yellow (7.5YR 6/8) and few medium prominent red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg2—30 to 46 inches; gray (10YR 6/1) clay loam; strong medium subangular blocky structure; firm, sticky and very plastic; common distinct clay films on faces of peds; few fine roots; few fine holes and pores; many medium prominent strong brown (7.5YR 5/8) and common medium prominent red (2.5YR 4/6) masses of iron accumulation; few fine flakes of mica; very strongly acid; clear wavy boundary.

Btg3—46 to 56 inches; gray (5Y 6/1) sandy clay; moderate medium subangular blocky structure; firm, sticky and very plastic; common distinct clay films; few fine roots; few fine holes and pores; common medium prominent brownish yellow (10YR 6/8) and few fine prominent red (2.5YR 5/6) masses of iron accumulation; common dark gray (10YR 4/1) streaks of clay; few fine flakes of mica; very strongly acid; gradual wavy boundary.

BC—56 to 68 inches; light gray (5Y 7/1) sandy clay loam; weak medium subangular blocky structure; slightly sticky and moderately plastic; few fine holes and pores; common medium prominent brownish yellow (10YR 6/8), few medium prominent yellowish red (5YR 5/8), and few medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; common medium prominent greenish gray (5G 5/1) iron depletions; very strongly acid; gradual smooth boundary.

Cg—68 to 80 inches; gray (N 6/0) sandy loam; massive; slightly sticky and slightly plastic; few pockets of light gray (10YR 7/1) sand; common medium prominent brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid to moderately acid in the upper part of the solum and extremely acid to strongly acid in the lower part of the solum

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 3 or less; or neutral in hue and value of 2 to 5
Texture—loam, silt loam, very fine sandy loam, fine sandy loam, sandy loam, or loamy sand

E horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 2 to 4
Texture—loam, silt loam, very fine sandy loam, fine sandy loam, sandy loam, or loamy sand

Bt horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 to 8
Texture—clay, clay loam, sandy clay loam, sandy clay, or silty clay
Redoximorphic features—few to many iron or clay depletions in shades of gray, olive, or white and iron accumulations in shades of red, yellow, or brown

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 7
Texture—clay or clay loam, or, less commonly, sandy clay or silty clay
Redoximorphic features—common or many iron or clay depletions in shades of gray, olive, or white and iron accumulations in shades of red, yellow, or brown

BC or CB horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 7
Texture—sandy clay, silty clay loam, clay loam, sandy clay loam, or fine sandy loam
Redoximorphic features—common or many iron or clay depletions in shades of gray, olive, or

white and iron accumulations in shades of red, yellow, or brown

Cg horizon (where present):

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 2 or less; or neutral in hue and value of 5 to 7

Texture—sandy clay, silty clay loam, clay loam, sandy loam, sandy clay loam, or fine sandy loam

Redoximorphic features—few to many iron or clay depletions in shades of gray, olive, green, or white and iron accumulations in shades of red, yellow, or brown

Wicksburg Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the surface and subsurface layers; slow in the subsoil
Parent material: Sandy and clayey marine sediments
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Convex to smooth slopes
Slope: 2 to 8 percent
Taxonomic class: Fine, kaolinitic, thermic Arenic Paleudults

Commonly Associated Soils

- Bonifay soils, which are in positions similar to those of the Wicksburg soil and are grossarenic
- Nankin soils, which are in the slightly lower positions and are typic
- Troup soils, which are in the higher positions, are grossarenic, and are somewhat excessively drained

Typical Pedon

Wicksburg loamy sand, in an area of Wicksburg-Nankin complex, 2 to 5 percent slopes; from the Official Series Description for the typical pedon located in Houston County, Alabama; USGS Grangeburg topographic quadrangle; lat. 31 degrees 02 minutes 32.7 seconds N. and long. 85 degrees 11 minutes 47.5 seconds W.

Ap—0 to 9 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; moderately acid; clear smooth boundary.

E—9 to 26 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; many worm and root channels filled with material similar to that of the Ap horizon; strongly acid; abrupt wavy boundary.

Bt1—26 to 30 inches; yellowish brown (10YR 5/4) sandy clay loam; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; few medium faint very pale brown (10YR 7/4) masses of iron accumulation; strongly acid; clear wavy boundary.

Bt2—30 to 65 inches; yellowish brown (10YR 5/8) clay; moderate medium subangular blocky structure; very firm; common faint clay films on faces of peds; many medium prominent red (2.5YR 4/8) and strong brown (7.5YR 5/8) masses of iron accumulation; white (10YR 8/1) reticulate iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Content and size of rock fragments: None
Content of plinthite: None
Reaction: Very strongly acid or strongly acid throughout

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 3. Where value is 3.5 or less, the horizon is 10 inches thick or less.

Texture—loamy fine sand, loamy sand, fine sand, sand, or gravelly coarse sand

E horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6

Texture—loamy fine sand, loamy sand, fine sand, or sand

Bt horizon (upper part):

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8

Texture—sandy clay loam, clay loam, or sandy clay

Redoximorphic features—none to common iron accumulations in shades of red and brown

Bt horizon (lower part):

Color—hue of 5YR to 10YR, value of 5 to 7, and chroma of 6 to 8; or no dominant color and multicolored in shades of yellow brown, red, and gray

Texture—clay loam, sandy clay, or clay

Redoximorphic features—none to common iron accumulations in shades of red and brown and iron depletions in shades of gray

Formation of the Soils

In this section, the factors of soil formation are related to the soils in Houston County, the processes of horizon differentiation are explained, and the geologic processes in the county are described.

Factors of Soil Formation

Soil is a natural, three-dimensional body on the earth's surface that supports plants. It forms through weathering and other processes that act on deposited or accumulated geologic material. The kind of soil that forms depends on the type of parent material; the climate under which soil material has existed since accumulation; the relief, or lay of the land; the plant and animal life in and on the soil; and the length of time that the forces of soil formation have acted on the soil material. The relative importance of each of these factors differs from place to place; in some areas, one factor is more important, and in other areas another may dominate. A modification or variation in any of the factors results in a different kind of soil (Birkeland, 1984; Jenny, 1941 and 1980; and Buol, Hole, and McCracken, 1980).

Climate and living organisms are the active factors of soil formation. They act on parent material and change it into a natural body that has definite characteristics. The effects of climate and living organisms are conditioned by relief, which influences surface drainage; the amount of water that percolates through the soil; the rate of erosion; and the kind of vegetation that grows on the soil. The nature of the parent material also affects the kind of soil profile that is formed. Time is needed for the parent material to change into a soil. The development of a distinct soil horizon normally requires a long period of time.

Parent Material

Parent material is the initial physical body that is changed by the other soil-forming factors over time. Generally, the younger the soil, the greater the influence of the parent material on soil properties. The nature of the parent material can be expressed in many ways in the soil profile, including color, texture, and mineralogy. These properties can be related to physical and chemical properties, such as susceptibility to erosion, shrink-swell potential, and cation-exchange capacity.

The soils in the survey area formed mainly either in sandy, loamy, or clayey marine sediments or in water-deposited material on stream terraces and flood plains. Bonifay, Lucy, and Troup soils are upland soils that formed from sandy and loamy marine sediments. Dothan and Clarendon soils are upland soils that formed from loamy marine sediments. Dunbar and Grady soils are upland soils that formed from clayey marine sediments. Cahaba, Kenansville, and Kolomoki soils formed in water-deposited material on stream terraces. Bibb, Osier, and Kinston soils formed in water-deposited material on flood plains.

Climate

The climate in the survey area is warm and humid. Summers are long and hot. Winters are short and mild, and the ground rarely freezes to a depth of more than a few inches. The climate is fairly even throughout the county and accounts for few differences between the soils. Rainfall averages about 53 inches a year. Detailed information is given in the "Climate" section and in table 1.

The mild, humid climate favors rapid decomposition of organic matter and increases the rate of chemical reactions in the soil. The plentiful rainfall leaches large amounts of soluble bases and carries the less soluble fine particles downward, resulting in soils that are acid, that have a sandy surface layer, and that are low in natural fertility. The large amount of moisture and the warm temperature favor the growth of bacteria and fungi and speed the decomposition of organic matter, resulting in soils that have a low content of organic matter.

Relief

Relief varies significantly in the survey area and generally can be related to the physiographic regions and geologic units in the county. It ranges from low (about 120 feet) on the flood plains and stream terraces to very high (about 345 feet) in the hills.

Relief influences the formation of soil through its effects on drainage, runoff, and erosion. Soil properties that are influenced by relief include the thickness of the solum, the thickness of the A horizon, the color of the profile, the degree of horizon differentiation, and the relative wetness of the profile. The thickness of the solum is one of the properties most obviously related to relief. Soils on nearly level summits tend to have a solum that is thicker than that of soils on steep side slopes.

Relief also affects moisture relationships in soil. It affects the depth to ground water and the amount of water that is available for plant growth. Generally, the water table is closer to the surface in depressions than on the higher parts of the landscape.

Plants and Animals

Living organisms greatly influence the processes of soil formation and the characteristics of the soils. Trees, grasses, insects, earthworms, rodents, fungi, bacteria, and other forms of plant and animal life are affected by the other soil-forming factors. Animal activity is largely confined to the surface layer of the soil. The soil is continually mixed by this activity, which improves water infiltration. Plant roots create channels through which air and water move more rapidly, thereby improving soil structure and increasing the rate of chemical reactions in the soil.

Microorganisms help to decompose organic matter, which releases plant nutrients and chemicals into the soil. These nutrients are either used by the plants or are leached from the soil. Human activities that influence plant and animal populations in the soil affect the rate of soil formation.

The native vegetation in the uplands of Houston County consisted dominantly of coniferous and deciduous trees. The understory consisted of numerous species, including gallberry, southern bayberry, holly, panicum, bluestem, American beautyberry, Indiangrass, longleaf uniola, and flowering dogwood. These species represent only a very limited number of the wide variety of plants native to Houston County but can be used as a guide to plants presently in the survey area.

The plant communities are also reflected in the species distribution of fauna. Animals, in turn, have an impact on the soil properties of a particular area. For example, ants, worms, moles, armadillos, and gophers can improve aeration in a compacted soil. Microbes that thrive in a particular plant community react to various soil conditions and consequently influence the soil profile by providing decayed organic matter and nitrogen to the soil matrix.

Time

If all other factors of soil formation are equal, the degree of soil formation is in direct proportion to time. If soil-forming factors have been active for a long time, horizon development is stronger than if these same factors have been active for a relatively short time. Some parent materials are more easily weathered than others. The rate of weathering is dependent on the mineral composition and degree of consolidation of the parent material. “Time zero” for soil formation is considered to be that point in time when fresh parent material is first exposed to the other soil forming-factors. Commonly, this is a catastrophic occurrence, such as a flood, a change in topography resulting from a geologic event, a severe episode of erosion, or the influence of humans on the landscape.

The youngest soils are the alluvial soils on active flood plains along streams and rivers. These soils receive deposits of sediment and are undergoing a cumulative soil-forming process. In most cases, these young soils have weakly defined horizons, mainly because the soil-forming processes have been active for only a short time. Bibb, Osier, Kinston, and Mantachie soils are examples of young soils.

Soils on terraces along the Chattahoochee and Choctawhatchee Rivers and other streams are older than the soils on flood plains but are still relatively young. Although the soils on terraces formed in material deposited by the stream, they are no longer reached by frequent overflows because the channel is now deeper. Many of these soils have relatively strong horizon development. Annemaine, Cahaba, Kenansville, and Kolomoki soils are examples of soils on stream terraces having varying age and elevation.

Soils on uplands are generally older than soils on terraces or flood plains and range in age from young to very old. The degree of soil development depends on landscape position and composition of the parent material. Dothan, Varina, Orangeburg, and Redbay soils are examples of soils on uplands.

Processes of Horizon Differentiation

The main processes involved in the formation of soil horizons are accumulation of organic matter, leaching of calcium carbonate and other bases, reduction and transfer of iron, and formation and translocation of silicate clay minerals. These processes can occur in combination or individually, depending on the integration of the factors of soil formation.

Most soils have four main horizons. The A horizon is the surface layer. It is the horizon of maximum accumulation of organic matter. It commonly is darker than horizons below it because of the influence of the organic matter. Organic matter has accumulated to form an A horizon in all of the soils in the county. The content of organic matter varies between soils because of differences in relief, wetness, and natural fertility.

The E horizon, usually called the subsurface layer, occurs in many of the soils in the county, especially the soils on uplands. It is the horizon of maximum loss of soluble or suspended material. It commonly is lighter in color and coarser in texture than the overlying and underlying horizons. Lucy and Ocilla soils have both an A horizon and an E horizon. Other soils have an A horizon but do not have an E horizon. Examples are Iuka and Riverview soils.

The B horizon, usually called the subsoil, is directly below the A or E horizon. It is the horizon of maximum accumulation of dissolved or suspended material, such as iron or clay. Soils on old, stable landforms generally have a thick, well structured B horizon. Examples are Dothan and Red Bay soils. Soils on flood plains either do not have a B horizon or have a weakly developed B horizon. Examples are Bibb, Osier, and Kinston soils.

The C horizon is the substratum. It has been affected very little by the soil forming processes but is typically somewhat modified by weathering.

The chemical reduction and transfer of iron, called gleying, is evident in the wet soils in the survey area. Gleying results in gray colors in the subsoil and gray mottles in other horizons. The gray colors indicate the reduction and loss of iron and manganese. The horizons of some soils, such as Dunbar and Goldsboro soils, have reddish and brownish redoximorphic features, which indicate a segregation of iron.

In uniform materials, natural drainage generally is closely associated with slope or relief. It generally affects the color of the soil. Soils that formed under good drainage conditions have a subsoil that is uniformly bright in color. Dothan, Lucy, and Redbay soils are examples. Soils that formed under poor drainage conditions have grayish colors. Byars, Grady, and Pansey soils are examples. Soils that formed where drainage is intermediate have a subsoil that is mottled in shades of gray, red, and brown. Clarendon and Goldsboro soils are examples. The grayish colors persist even if artificial drainage is provided. The white and light gray colors in the lower part of the Cowarts and Nankin soils are assumed to be inherited from the parent material.

In steep areas, the surface soil erodes. In low areas and in depressions, soil materials commonly accumulate and add to the thickness of the surface layer. In some areas, the rate of formation of soil materials and the rate of removal of soil materials are in equilibrium.

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Glossary

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. Material, such as sand, silt, or clay, deposited on land by streams.
Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.
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.
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.
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. 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 planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.
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. The normal flood plain of a stream, subject to flooding.
Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.
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 but 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.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

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. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

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 slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff 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. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

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. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

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. 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.

Cropping system. Growing crops according to a planned system of rotation and management practices.

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.

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.

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.

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.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

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.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

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 layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

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. 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.

Fast intake (in tables). The rapid movement of water into the soil.

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. 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. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. 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 miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. 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.

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.

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.

Head slope. 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 natural elevation 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; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

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.

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.

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 are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

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. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only 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. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

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.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

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.

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.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

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. Nearly all such rocks are crystalline.

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. An area 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.

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).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

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. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

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.

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

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.

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.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

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.

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.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in 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

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

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.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

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.

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.

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.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

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 formed by the hardening of a clay deposit.

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 position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

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. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

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. Sedimentary rock made up of dominantly silt-sized particles.

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 depression in the landscape where limestone has been dissolved.

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.

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
Very gently sloping	2 to 5 percent
Gently sloping	5 to 8 percent
Moderately sloping	8 to 12 percent
Strongly sloping	12 to 25 percent

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

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 over periods 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. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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.

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.

Terrace. 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 (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

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 position that forms 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.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

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 and chemical changes produced in rocks or other deposits at or near the earth’s surface by atmospheric agents. These changes result in disintegration and decomposition of the 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

Table 1.--Temperature and Precipitation

[Recorded in the period 1971 to 2000 at Headland, AL]

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	*°F*	*°F*	*°F*	*°F*	*Units*	*In*	*In*	*In*		*In*
January-----	58.6	35.9	47.3	78	13	88	6.47	3.97	8.80	8	0.1
February----	62.9	39.0	51.0	81	19	126	5.36	2.76	7.85	6	0.1
March-------	70.8	46.2	58.5	86	24	291	6.27	3.81	8.39	7	0.0
April-------	77.6	51.8	64.7	91	33	442	3.85	1.37	6.10	4	0.0
May---------	85.0	60.3	72.7	95	44	703	4.18	1.67	6.54	5	0.0
June--------	90.3	66.8	78.6	100	54	857	4.91	2.67	6.66	7	0.0
July--------	92.0	69.0	80.5	101	61	946	6.06	3.29	8.44	9	0.0
August------	91.5	67.8	79.6	100	59	915	4.20	2.07	6.05	7	0.0
September---	87.7	63.5	75.6	98	47	768	3.74	1.51	5.89	5	0.0
October-----	78.9	51.7	65.3	91	32	475	3.18	0.72	5.71	3	0.0
November----	69.6	44.8	57.2	85	25	248	4.25	2.38	5.66	5	0.0
December----	61.6	38.1	49.9	80	15	121	4.24	2.27	5.95	6	0.0
Yearly:											
Average---	77.2	52.9	65.1	---	---	---	---	---	---	---	---
Extreme---	108	0	---	102	10	---	---	---	---	---	---
Total-----	---	---	---	---	---	5979	56.71	42.81	66.38	72	0.3

* 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)

Table 2.--Freeze Dates in Spring and Fall

[Recorded in the period 1971 to 2000 at Headland, AL]

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--	March 9	March 15	March 28
2 year in 10 later than--	March 1	March 7	March 21
5 year in 10 later than--	February 12	February 22	March 9
First freezing temperature in fall:			
1 yr in 10 earlier than--	November 20	November 4	October 20
2 yr in 10 earlier than--	December 1	November 13	October 27
5 yr in 10 earlier than--	December 22	November 29	November 10

Table 3.--Growing Season

[Recorded in the period 1971 to 2000 at Headland, AL]

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	274	253	221
8 years in 10	288	264	229
5 years in 10	316	283	246
2 years in 10	344	303	262
1 year in 10	359	313	270

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AnA	Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded	3,826	1.0
ArA	Ardilla fine sandy loam, 0 to 2 percent slopes	3,456	0.9
BnB	Benevolence loamy sand, 2 to 5 percent slopes	1,100	0.3
BnD	Benevolence loamy sand, 5 to 15 percent slopes	633	0.2
BOA	Bibb, Osier, and Kinston soils, 0 to 1 percent slopes, frequently flooded	31,335	8.4
BuB	Buncombe-Bigbee complex, 0 to 5 percent slopes, frequently flooded	1,069	0.3
CdA	Clarendon loamy sand, 0 to 2 percent slopes	8,333	2.2
CoB	Cowarts fine sandy loam, 2 to 5 percent slopes	1,871	0.5
DBA	Dorovan, Byars, and Grady soils, ponded	5,756	1.5
DoA	Dothan loamy sand, 0 to 2 percent slopes	22,111	5.9
DoB	Dothan loamy sand, 2 to 5 percent slopes	79,438	22.1
DoC	Dothan loamy sand, 5 to 8 percent slopes	7,631	2.1
DsA	Dunbar-Goldsboro complex, 0 to 2 percent slopes	2,315	0.6
FaA	Faceville fine sandy loam, 0 to 2 percent slopes	1,899	0.5
FaB	Faceville fine sandy loam, 2 to 5 percent slopes	6,133	1.6
FqB	Fuquay loamy sand, 0 to 5 percent slopes	11,736	3.2
GbA	Grady-Byars complex, depressional	5,127	1.4
KeA	Kenansville loamy sand, 0 to 2 percent slopes, rarely flooded	1,986	0.5
KhB	Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded	2,807	0.8
LcB	Lucy loamy sand, 0 to 5 percent slopes	3,479	0.9
LcC	Lucy loamy sand, 5 to 8 percent slopes	1,802	0.5
LtE	Lucy-Troup complex, 8 to 20 percent slopes	4,374	1.2
MIA	Mantachie, Iuka, and Kinston soils, 0 to 1 percent slopes, frequently flooded	4,580	1.2
MtA	Meggett fine sandy loam, 0 to 1 percent slopes, frequently flooded	1,055	0.3
NaB	Nankin sandy loam, 2 to 5 percent slopes	3,347	0.9
NcD	Nankin-Cowarts complex, 5 to 12 percent slopes	16,809	4.5
NpE	Nankin-Lucy-Springhill complex, 12 to 20 percent slopes	3,296	0.9
NsE	Nankin-Springhill-Henderson complex, 8 to 20 percent slopes, cobbly	1,908	0.5
OiA	Ocilla-Albany complex, 0 to 2 percent slopes	4,137	1.1
OrA	Orangeburg sandy loam, 0 to 2 percent slopes	5,200	1.4
OrB	Orangeburg sandy loam, 2 to 5 percent slopes	16,253	4.4
OrC	Orangeburg sandy loam, 5 to 8 percent	2,741	0.7
PaA	Pansey fine sandy loam, depressional	8,017	2.2
PeA	Pansey fine sandy loam, 0 to 2 percent slopes, occasionally flooded	4,325	1.2
PmA	Plummer sand, 0 to 2 percent slopes	3,794	1.0
Pt	Pits	461	0.1
RbA	Red Bay sandy loam, 0 to 2 percent slopes	2,098	0.6
RbB	Red Bay sandy loam, 2 to 5 percent slopes	6,657	1.8
RbC	Red Bay sandy loam, 5 to 8 percent slopes	2,204	0.6
RvB	Riverview silt loam, 0 to 5 percent slopes, occasionally flooded	729	0.2
TnB	Troup-Bonifay complex, 0 to 5 percent slopes	33,090	8.9
TnC	Troup-Bonifay complex, 5 to 8 percent slopes	4,881	1.3
TyB	Troup-Lucy complex, 0 to 5 percent slopes	6,444	1.7
UbA	Urban land-Bibb-Kinston complex, 0 to 2 pecent slopes, frequently flooded	773	0.2
UcA	Urban land-Clarendon-Ardilla complex, 0 to 2 percent slopes	366	*
UdB	Urban land-Dothan complex, 0 to 5 percent slopes	12,156	3.3
UrB	Urban land-Red Bay complex, 0 to 5 percent slopes	2,358	0.6
VaB	Varina sandy loam, 2 to 5 percent slopes	9,303	2.5
WnB	Wicksburg-Nankin complex, 2 to 5 percent slopes	1,436	0.4
WnC	Wicksburg-Nankin complex, 5 to 8 percent slopes	1,509	0.4
W	Water	1,155	0.3
	Total	372,060	100.0

* Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops

[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	Corn	Cotton lint	Peanuts	Soybeans	Watermelons
		Bu	*Lbs*	*Lbs*	*Bu*	*Tons*
AnA		100	---	2,900	35	---
Annemaine	2w					
Wahee	3w					
ArA	2w	85	700	---	45	---
Ardilla						
BnB	2e	85	700	3,200	30	4
Benevolence						
BnD	4e	---	---	---	---	---
Benevolence						
BOA		---	---	---	---	---
Bibb	5w					
Osier	5w					
Kinston	6w					
BuB		50	---	---	---	---
Buncombe	5w					
Bigbee	3s					
CdA	2w	125	500	2,800	35	---
Clarendon						
CoB	2e	70	600	2,000	25	---
Cowarts						
DBA		---	---	---	---	---
Dorovan	7w					
Grady	5w					
Byars	6w					
DoA	1	120	900	3,800	40	5
Dothan						
DoB	2e	120	900	3,600	35	4
Dothan						
DoC	3e	100	800	3,600	30	---
Dothan						
DsA		90	750	3,000	40	4
Dunbar	2w					
Goldsboro	2w					
FaA	1	115	875	4,000	45	6
Faceville						
FaB	2e	115	875	4,000	45	5
Faceville						
FqB	2s	85	650	3,200	25	4
Fuquay						
GbA		---	---	---	---	---
Grady	5w					
Byars	6w					

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Peanuts	Soybeans	Watermelons
		Bu	*Lbs*	*Lbs*	*Bu*	*Tons*
KeA---------------------- Kenansville	2s	85	550	2,700	---	4
KhB----------------------		115	875	4,000	45	6
Kolomoki----------------	1					
Cahaba------------------	1					
LcB---------------------- Lucy	2s	80	650	3,000	33	4
LcC---------------------- Lucy	3s	70	600	2,500	25	3
LtE----------------------		---	---	---	---	---
Lucy--------------------	6e					
Troup-------------------	6s					
MIA----------------------		---	---	---	---	---
Mantachie---------------	5w					
Iuka--------------------	5w					
Kinston-----------------	6w					
MtA---------------------- Meggett	6w	---	---	---	---	---
NaB---------------------- Nankin	3e	65	---	2,200	25	---
NcD----------------------		65	---	2,200	25	---
Nankin------------------	4e					
Cowarts-----------------	4e					
NpE----------------------		---	---	---	---	---
Nankin------------------	6e					
Lucy--------------------	6e					
Springhill--------------	6e					
NsE----------------------		---	---	---	---	---
Nankin------------------	6e					
Springhill--------------	6e					
Henderson---------------	6e					
OiA----------------------		95	550	2,200	35	4
Ocilla------------------	3w					
Albany------------------	3w					
OrA---------------------- Orangeburg	1	120	900	4,000	45	6
OrB---------------------- Orangeburg	2e	120	900	4,000	45	5
OrC---------------------- Orangeburg	3e	95	800	3,200	35	---
PaA---------------------- Pansey	4w	---	---	---	---	---
PeA---------------------- Pansey	4w	---	---	---	---	---
PmA---------------------- Plummer	4w	---	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Peanuts	Soybeans	Watermelons
		Bu	*Lbs*	*Lbs*	*Bu*	*Tons*
Pt-----------------------	8s	---	---	---	---	---
Pits, borrow						
RbA----------------------	1	90	750	3,500	---	6
Red Bay						
RbB----------------------	2e	85	700	2,800	---	5
Red Bay						
RbC----------------------	3e	85	700	2,800	---	---
Red Bay						
RvB----------------------	2w	130	700	---	40	---
Riverview						
TnB----------------------		60	---	2,200	---	4
Troup-------------------	3s					
Bonifay-----------------	4s					
TnC----------------------		55	---	1,800	---	3
Troup-------------------	3s					
Bonifay-----------------	4s					
TyB----------------------		60	500	2,200	25	---
Troup-------------------	3s					
Lucy--------------------	2s					
UbA----------------------		---	---	---	---	---
Urban land--------------	---					
Bibb--------------------	5w					
Kinston-----------------	6w					
UcA----------------------		---	---	---	---	---
Urban land--------------	---					
Clarendon---------------	2w					
Ardilla-----------------	2w					
UdB----------------------		---	---	---	---	---
Urban land--------------	---					
Dothan------------------	2e					
UrB----------------------		---	---	---	---	---
Urban land--------------	---					
Red Bay-----------------	2e					
VaB----------------------	2e	75	750	3,200	35	5
Varina						
WnB----------------------		60	600	2,500	20	3
Wicksburg---------------	2s					
Nankin------------------	3e					
WnC----------------------		50	550	2,500	20	3
Wicksburg---------------	2s					
Nankin------------------	3e					

Table 6.--Land Capability and Yields per Acre of Pasture

[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	Bahiagrass	Cool-season grasses	Grass hay	Improved bermudagrass	Warm season grasses
		AUM	*AUM*	*Tons*	*AUM*	*AUM*
AnA		9.0	4.0	6.0	8.5	4.0
Annemaine	2w					
Wahee	3w					
ArA	2w	8.5	4.0	4.5	8.5	6.0
Ardilla						
BnB	2e	8.0	5.0	5.5	10.0	5.0
Benevolence						
BnD	4e	6.0	5.0	5.5	6.0	5.0
Benevolence						
BOA		---	---	3.0	---	---
Bibb	5w					
Osier	5w					
Kinston	6w					
BuB		7.5	4.0	---	---	4.0
Buncombe	5w					
Bigbee	3s					
CdA	2w	7.5	4.0	5.5	8.0	6.0
Clarendon						
CoB	2e	8.0	5.0	3.5	7.5	5.5
Cowarts						
DBA		---	---	---	---	---
Dorovan	7w					
Grady	5w					
Byars	6w					
DoA	1	9.0	5.0	6.0	10.0	6.0
Dothan						
DoB	2e	9.0	5.0	6.0	10.0	6.0
Dothan						
DoC	3e	8.0	4.5	5.5	9.5	5.5
Dothan						
DsA		7.0	4.0	5.5	8.5	6.0
Dunbar	2w					
Goldsboro	2w					
FaA	1	7.0	5.0	6.0	10.0	5.0
Faceville						
FaB	2e	7.0	5.0	6.0	10.0	5.0
Faceville						
FqB	2s	7.0	4.5	5.5	8.0	5.0
Fuquay						
GbA		---	---	---	---	---
Grady	5w					
Byars	6w					

Table 6.--Land Capability and Yields per Acre of Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Cool-season grasses	Grass hay	Improved bermudagrass	Warm season grasses
		AUM	AUM	Tons	AUM	AUM
KeA: Kenansville	2s	8.5	4.5	5.5	8.0	5.0
KhB:		7.0	5.0	7.0	10.0	5.0
Kolomoki	1					
Cahaba	1					
LcB: Lucy	2s	8.5	5.0	5.5	8.0	5.0
LcC: Lucy	3s	8.5	4.0	5.0	7.5	5.0
LtE:		---	---	---	---	---
Lucy	6e					
Troup	6s					
MIA:		---	---	---	---	---
Mantachie	5w					
Iuka	5w					
Kinston	6w					
MtA: Meggett	6w	---	---	---	---	---
NaB: Nankin	3e	7.0	4.0	4.5	9.5	5.0
NcD:		7.0	4.0	4.5	9.5	5.0
Nankin	4e					
Cowarts	4e					
NpE:		---	---	---	---	---
Nankin	6e					
Lucy	6e					
Springhill	6e					
NsE:		---	---	---	---	---
Nankin	6e					
Springhill	6e					
Henderson	6e					
OiA:		7.5	4.0	5.0	8.5	4.0
Ocilla	3w					
Albany	3w					
OrA: Orangeburg	1	8.5	5.0	6.5	10.5	6.0
OrB: Orangeburg	2e	8.5	5.0	6.0	10.5	6.0
OrC: Orangeburg	3e	8.0	4.5	5.5	10.0	---
PaA: Pansey	4w	6.5	---	---	7.0	---
PeA: Pansey	4w	6.5	---	---	7.0	---
PmA: Plummer	4w	5.0	---	---	6.0	---

Table 6.--Land Capability and Yields per Acre of Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Cool-season grasses	Grass hay	Improved bermudagrass	Warm season grasses
		AUM	*AUM*	*Tons*	*AUM*	*AUM*
Pt----------------------- Pits, borrow	8s	---	---	---	---	---
RbA---------------------- Red Bay	1	8.5	5.0	6.5	10.0	6.0
RbB---------------------- Red Bay	2e	8.5	5.0	6.0	9.0	6.0
RbC---------------------- Red Bay	3e	8.0	4.5	6.0	9.0	5.5
RvB---------------------- Riverview	2w	8.0	---	---	10.0	5.0
TnB----------------------		7.0	4.0	5.0	7.5	4.5
Troup-------------------	3s					
Bonifay-----------------	4s					
TnC----------------------		7.0	4.0	5.0	7.5	4.0
Troup-------------------	3s					
Bonifay-----------------	4s					
TyB----------------------		7.0	4.0	4.0	7.5	---
Troup-------------------	3s					
Lucy--------------------	2s					
UbA----------------------		---	---	---	---	---
Urban land--------------	---					
Bibb--------------------	5w					
Kinston-----------------	6w					
UcA----------------------		---	---	---	---	---
Urban land--------------	---					
Clarendon---------------	2w					
Ardilla-----------------	2w					
UdB----------------------		---	---	---	---	---
Urban land--------------	---					
Dothan------------------	2e					
UrB----------------------		---	---	---	---	---
Urban land--------------	---					
Red Bay-----------------	2e					
VaB---------------------- Varina	2e	7.5	5.0	5.5	9.0	5.0
WnB----------------------		7.0	3.5	4.0	7.0	---
Wicksburg---------------	2s					
Nankin------------------	3e					
WnC----------------------		6.5	3.5	4.0	6.5	---
Wicksburg---------------	2s					
Nankin------------------	3e					

Table 7.--Hydric Soils List

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
AnA--------------------Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded	Annemaine	No	Terrace	---	---	---	---
	Wahee	No	Terrace	---	---	---	---
ArA--------------------Ardilla fine sandy loam, 0 to 2 percent slopes	Ardilla	No	Flat	---	---	---	---
	Pansey	Yes	Depression	2B3	Yes	No	No
BnB--------------------Benevolence loamy sand, 2 to 5 percent slopes	Benevolence	No	Ridge	---	---	---	---
BnD--------------------Benevolence loamy sand, 5 to 15 percent slopes	Benevolence	No	Ridge	---	---	---	---
BOA--------------------Bibb, Osier, and Kinston soils, 0 to 1 percent slopes, frequently flooded	Bibb	Yes	Flood plain	2B3,4	Yes	Yes	No
	Osier	Yes	Flood plain	2B2	Yes	Yes	No
	Kinston	Yes	Flood plain	2B3,3,4	Yes	Yes	Yes
	Plummer	Yes	Flat	2B2	Yes	No	No
BuB--------------------Buncombe-Bigbee complex, 0 to 5 percent slopes, frequently flooded	Buncombe	No	---	---	---	---	---
CdA--------------------Clarendon loamy sand, 0 to 2 percent slopes	Clarendon	No	---	---	---	---	---
	Grady	Yes	Depression	3,2B3	Yes	No	Yes
CoB--------------------Cowarts fine sandy loam, 2 to 5 percent slopes	Cowarts	No	---	---	---	---	---
DBA--------------------Dorovan, Byars, and Grady soils, ponded	Dorovan	Yes	Swamp	3,4,1	Yes	Yes	Yes
	Grady	Yes	Depression	3,2B3	Yes	No	Yes
	Byars	Yes	Depression	2B3,3	Yes	No	Yes
	Plummer	Yes	Flat	2B2	Yes	No	No
DoA--------------------Dothan loamy sand, 0 to 2 percent slopes	Dothan	No	---	---	---	---	---
	Grady	Yes	Depression	2B3,3	Yes	No	Yes
DoB--------------------Dothan loamy sand, 2 to 5 percent slopes	Dothan	No	---	---	---	---	---
	Grady	Yes	Depression	3,2B3	Yes	No	Yes
DoC--------------------Dothan loamy sand, 5 to 8 percent slopes	Dothan	No	---	---	---	---	---

Table 7.--Hydric Soils List--Continued

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria: Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
DsA------------------- Dunbar-Goldsboro complex, 0 to 2 percent slopes	Dunbar	No	---	---	---	---	---
	Grady	Yes	Depression	2B3,3	Yes	No	Yes
FaA------------------- Faceville fine sandy loam, 0 to 2 percent slopes	Faceville	No	---	---	---	---	---
FaB------------------- Faceville fine sandy loam, 2 to 5 percent slopes	Faceville	No	---	---	---	---	---
FqB------------------- Fuquay loamy sand, 0 to 5 percent slopes	Fuquay	No	---	---	---	---	---
GbA------------------- Grady-Byars complex, depressional	Grady	Yes	Depression	2B3,3	Yes	No	Yes
	Byars	Yes	Depression	3,2B3	Yes	No	Yes
KeA------------------- Kenansville loamy sand, 0 to 2 percent slopes, rarely flooded	Kenansville	No	---	---	---	---	---
KhB------------------- Kolomoki-Cahaba complex, 0 to 3 percent slopes, rarely flooded	Kolomoki	No	---	---	---	---	---
	Cahaba	No	---	---	---	---	---
LcB------------------- Lucy loamy sand, 0 to 5 percent slopes	Lucy	No	---	---	---	---	---
LcC------------------- Lucy loamy sand, 5 to 8 percent slopes	Lucy	No	---	---	---	---	---
LtE------------------- Lucy-Troup complex, 8 to 20 percent slopes	Lucy	No	---	---	---	---	---
	Troup	No	---	---	---	---	---
	Bibb	Yes	Flood plain	4,2B3	Yes	Yes	No
MIA------------------- Mantachie, Iuka, and Kinston soils, 0 to 1 percent slopes, frequently flooded	Mantachie	No	Flood plain	---	---	---	---
	Iuka	No	---	---	---	---	---
	Kinston	Yes	Flood plain	2B3,3,4	Yes	Yes	Yes
MtA------------------- Meggett fine sandy loam, 0 to 1 percent slopes, frequently flooded	Meggett	Yes	Backswamp	2B3	Yes	Yes	No

Table 7.--Hydric Soils List--Continued

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria: Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
NaB: Nankin sandy loam, 2 to 5 percent slopes	Nankin	No	---	---	---	---	---
NcD: Nankin-Cowarts complex, 5 to 12 percent slopes	Nankin	No	---	---	---	---	---
	Cowarts	No	---	---	---	---	---
	Bibb	Yes	Flood plain	4,2B3	Yes	Yes	No
NpE: Nankin-Lucy-Springhill complex, 12 to 20 percent slopes	Nankin	No	---	---	---	---	---
	Lucy	No	---	---	---	---	---
	Springhill	No	---	---	---	---	---
	Bibb	Yes	Flood plain	2B3,4	Yes	Yes	No
NsE: Nankin-Springhill-Henderson complex, 8 to 20 percent slopes, cobbly	Nankin	No	---	---	---	---	---
	Springhill	No	---	---	---	---	---
	Henderson	No	---	---	---	---	---
	Bibb	Yes	Flood plain	2B3,4	Yes	Yes	No
OiA: Ocilla-Albany complex, 0 to 2 percent slopes	Ocilla	No	---	---	---	---	---
	Albany	No	---	---	---	---	---
	Plummer	Yes	Flat	2B2	Yes	No	No
OrA: Orangeburg sandy loam, 0 to 2 percent slopes	Orangeburg	No	---	---	---	---	---
OrB: Orangeburg sandy loam, 2 to 5 percent slopes	Orangeburg	No	---	---	---	---	---
OrC: Orangeburg sandy loam, 5 to 8 percent	Orangeburg	No	---	---	---	---	---
PaA: Pansey fine sandy loam, depressional	Pansey	Yes	Depression	2B3	Yes	No	No
	Plummer	Yes	Flat	2B2	Yes	No	No
PeA: Pansey fine sandy loam, 0 to 2 percent slopes, occasionally flooded	Pansey	Yes	Flood plain	2B3	Yes	No	No
	Bibb	Yes	Flood plain	4,2B3	Yes	Yes	No
	Plummer	Yes	Flat	2B2	Yes	No	No
PmA: Plummer sand, 0 to 2 percent slopes	Plummer	Yes	Flat	2B2	Yes	No	No
	Pansey	Yes	Depression	2B3	Yes	No	No
Pt: Pits	Pits, borrow	No	---	---	---	---	---
RbA: Red Bay sandy loam, 0 to 2 percent slopes	Red Bay	No	---	---	---	---	---
RbB: Red Bay sandy loam, 2 to 5 percent slopes	Red Bay	No	---	---	---	---	---

Table 7.--Hydric Soils List--Continued

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria: Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
RbC-------------------- Red Bay sandy loam, 5 to 8 percent slopes	Red Bay	No	---	---	---	---	---
RvB-------------------- Riverview silt loam, 0 to 5 percent slopes, occasionally flooded	Riverview	No	---	---	---	---	---
	Meggett	Yes	Backswamp	2B3	Yes	Yes	No
TnB-------------------- Troup-Bonifay complex, 0 to 5 percent slopes	Troup	No	---	---	---	---	---
	Bonifay	No	---	---	---	---	---
TnC-------------------- Troup-Bonifay complex, 5 to 8 percent slopes	Troup	No	---	---	---	---	---
	Bonifay	No	---	---	---	---	---
TyB-------------------- Troup-Lucy complex, 0 to 5 percent slopes	Troup	No	---	---	---	---	---
	Lucy	No	---	---	---	---	---
UbA-------------------- Urban land-Bibb-Kinston complex, 0 to 2 percent slopes, frequently flooded	Urban land	No	---	---	---	---	---
	Bibb	Yes	Flood plain	2B3,4	Yes	Yes	No
	Kinston	Yes	Flood plain	2B3,3,4	Yes	Yes	Yes
	Plummer	Yes	Flat	2B2	Yes	No	No
UcA-------------------- Urban land-Clarendon-Ardilla complex, 0 to 2 percent slopes	Urban land	No	---	---	---	---	---
	Clarendon	No	---	---	---	---	---
	Ardilla	No	---	---	---	---	---
	Pansey	Yes	Depression	2B3	Yes	No	No
UdB-------------------- Urban land-Dothan complex, 0 to 5 percent slopes	Urban land	No	---	---	---	---	---
	Dothan	No	---	---	---	---	---
UrB-------------------- Urban land-Red Bay complex, 0 to 5 percent slopes	Urban land	No	---	---	---	---	---
	Red Bay	No	---	---	---	---	---
VaB-------------------- Varina sandy loam, 2 to 5 percent slopes	Varina	No	---	---	---	---	---
WnB-------------------- Wicksburg-Nankin complex, 2 to 5 percent slopes	Wicksburg	No	---	---	---	---	---
	Nankin	No	---	---	---	---	---
WnC-------------------- Wicksburg-Nankin complex, 5 to 8 percent slopes	Wicksburg	No	---	---	---	---	---
	Nankin	No	---	---	---	---	---

Table 8.--Forest Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
AnA:				
Annemaine	Slash pine	90	---	Loblolly pine, yellow-poplar, sweetgum, American sycamore, water oak, cherrybark oak
	Loblolly pine	90	114	
	Shortleaf pine	80	114	
	Water oak	90	---	
	Yellow-poplar	85	---	
	Sweetgum	95	86	
	American sycamore	90	100	
Wahee	Slash pine	90	---	Loblolly pine, sweetgum, American sycamore, water oak, cherrybark oak
	Loblolly pine	90	129	
	Sweetgum	95	100	
	Water oak	90	---	
	Swamp chestnut oak	85	---	
	Willow oak	90	---	
ArA:				
Ardilla	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine, sweetgum
	Longleaf pine	---	---	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	85	86	
BnB:				
Benevolence	Loblolly pine	85	129	Loblolly pine, slash pine
	Longleaf pine	75	---	
	Shortleaf pine	75	114	
	Slash pine	85	157	
BnD:				
Benevolence	Loblolly pine	85	129	Loblolly pine, slash pine
	Longleaf pine	75	---	
	Shortleaf pine	75	114	
	Slash pine	85	157	
BOA:				
Bibb	American sycamore	75	---	Loblolly pine, sweetgum, water oak, yellow-poplar
	Loblolly pine	95	157	
	Slash pine	95	---	
	Sweetgum	85	100	
	Water oak	85	86	
	Yellow-poplar	95	---	
Osier	Cherrybark oak	85	---	Cherrybark oak, loblolly pine, slash pine, yellow-poplar
	Loblolly pine	80	129	
	Slash pine	80	157	
	Yellow-poplar	85	---	
Kinston	Cherrybark oak	90	72	American sycamore, cherrybark oak, green ash, loblolly pine, sweetgum, yellow-poplar
	Eastern cottonwood	95	129	
	Loblolly pine	90	157	
	Sweetgum	85	114	
	White oak	---	72	
BuB:				
Buncombe	Yellow-poplar	95	117	American sycamore, loblolly pine, yellow-poplar
	Sweetgum	80	---	
	Loblolly pine	90	---	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
BuB:				
Bigbee	Loblolly pine	75	129	Loblolly pine
CdA:				
Clarendon	Loblolly pine	90	129	Loblolly pine, sweetgum, yellow-poplar
	Slash pine	90	---	
	Sweetgum	85	86	
CoB:				
Cowarts	Loblolly pine	85	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	72	
	Slash pine	85	157	
DBA:				
Dorovan	Baldcypress	---	---	Baldcypress
	Blackgum	70	100	
	Red maple	---	---	
Grady	Baldcypress	---	43	Baldcypress, swamp tupelo
	Swamp tupelo	---	---	
	Sweetgum	75	---	
	Water oak	65	57	
Byars	Swamp tupelo	---	---	Baldcypress, swamp tupelo
	Sweetgum	95	100	
	Water oak	85	86	
DoA:				
Dothan	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	114	
	Slash pine	90	172	
DoB:				
Dothan	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	114	
	Slash pine	90	172	
DoC:				
Dothan	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	114	
	Slash pine	90	172	
DsA:				
Dunbar	Loblolly pine	90	129	Loblolly pine, slash pine
	Longleaf pine	75	86	
	Slash pine	90	---	
	Sweetgum	70	100	
Goldsboro	Slash pine	90	---	Loblolly pine, slash pine
	Loblolly pine	85	127	
	Sweetgum	90	---	
FaA:				
Faceville	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	65	72	
	Slash pine	80	143	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
FaB:				
Faceville	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	65	72	
	Slash pine	80	143	
FqB:				
Fuquay	Loblolly pine	85	110	Loblolly pine, slash pine
	Longleaf pine	75	---	
	Slash pine	85	---	
GbA:				
Grady	Baldcypress	---	43	Baldcypress, swamp tupelo
	Swamp tupelo	---	86	
	Sweetgum	75	---	
	Water oak	65	57	
Byars	Swamp tupelo	---	143	Baldcypress, swamp tupelo
	Sweetgum	95	100	
	Water oak	85	86	
KeA:				
Kenansville	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	65	72	
KhB:				
Kolomoki	Loblolly pine	85	142	Loblolly pine, slash pine
	Slash pine	85	157	
	Longleaf pine	75	86	
	Sweetgum	90	100	
Cahaba	Loblolly pine	95	129	Loblolly pine, slash pine, sweetgum, water oak
	Shortleaf pine	85	114	
	Slash pine	95	172	
	Sweetgum	95	100	
LcB:				
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
LcC:				
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
LtE:				
Lucy	Slash pine	85	---	Slash pine, longleaf pine, loblolly pine
	Loblolly pine	85	110	
	Longleaf pine	75	86	
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MIA:				
Mantachie	Cherrybark oak	90	---	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar
	Green ash	85	57	
	Loblolly pine	100	143	
	Slash pine	100	---	
	Sweetgum	95	114	
	Yellow-poplar	90	100	
Iuka	Eastern cottonwood	115	143	Eastern cottonwood, loblolly pine, yellow-poplar
	Loblolly pine	105	129	
	Slash pine	105	---	
	Sweetgum	105	143	
	Water oak	100	100	
Kinston	Cherrybark oak	90	72	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar
	Eastern cottonwood	95	129	
	Loblolly pine	90	157	
	Sweetgum	85	114	
	White oak	---	72	
MtA:				
Meggett	Cherrybark oak	85	---	Cherrybark oak, slash pine, sweetgum
	Slash pine	90	186	
	Swamp chestnut oak	75	---	
	Sweetgum	85	---	
NaB:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
NcD:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
Cowarts	Loblolly pine	85	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	72	
	Slash pine	85	157	
NpE:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
Lucy	Slash pine	85	---	Slash pine, longleaf pine, loblolly pine
	Loblolly pine	85	110	
	Longleaf pine	75	86	
Springhill	Loblolly pine	85	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	75	129	
NsE:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
NsE:				
Springhill	Loblolly pine	85	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	75	129	
Henderson	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
OiA:				
Ocilla	Loblolly pine	90	114	Loblolly pine, slash pine, yellow-poplar
	Longleaf pine	75	100	
	Slash pine	90	157	
	Yellow-poplar	95	---	
Albany	Loblolly pine	85	143	Loblolly pine, slash pine
	Longleaf pine	---	100	
	Slash pine	85	157	
OrA:				
Orangeburg	Loblolly pine	85	114	Loblolly pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	
OrB:				
Orangeburg	Loblolly pine	85	114	Loblolly pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	
OrC:				
Orangeburg	Loblolly pine	85	114	Loblolly pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	
PaA:				
Pansey	Loblolly pine	85	114	Loblolly pine, slash pine, sweetgum, water oak
	Slash pine	85	143	
	Sweetgum	90	86	
	Water oak	85	72	
PeA:				
Pansey	Loblolly pine	85	114	Loblolly pine, slash pine, sweetgum, water oak
	Slash pine	85	143	
	Sweetgum	90	86	
	Water oak	85	72	
PmA:				
Plummer	Loblolly pine	80	129	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	157	
Pt:				
Pits, borrow.				
RbA:				
Red Bay	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	100	
	Slash pine	90	157	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
RbB:				
Red Bay	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	100	
	Slash pine	90	157	
RbC:				
Red Bay	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	100	
	Slash pine	90	157	
RvB:				
Riverview	Loblolly pine	100	157	American sycamore, eastern cottonwood, loblolly pine, slash pine, sweetgum, yellow-poplar
	Slash pine	100	---	
	Sweetgum	100	143	
	Yellow-poplar	110	129	
TnB:				
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
Bonifay	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	
TnC:				
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
Bonifay	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	
TyB:				
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Slash pine	85	157	
UbA:				
Urban land.				
Bibb	American sycamore	75	---	Loblolly pine, sweetgum, water oak, yellow-poplar
	Loblolly pine	95	157	
	Slash pine	95	---	
	Sweetgum	85	100	
	Water oak	85	86	
	Yellow-poplar	95	---	

Table 8.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
UbA:				
Kinston	Cherrybark oak	90	72	American sycamore, cherrybark oak, green ash, loblolly pine, sweetgum, yellow-poplar
	Eastern cottonwood	95	129	
	Loblolly pine	90	157	
	Sweetgum	85	114	
	White oak	---	72	
UcA:				
Urban land.				
Clarendon	Loblolly pine	90	129	Loblolly pine, sweetgum, yellow-poplar
	Slash pine	90	86	
	Sweetgum	85	---	
Ardilla	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine, sweetgum
	Longleaf pine	---	100	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	85	86	
UdB:				
Urban land.				
Dothan	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	114	
	Slash pine	90	172	
UrB:				
Urban land.				
Red Bay	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	100	
	Slash pine	90	157	
VaB:				
Varina	Loblolly pine	95	114	Loblolly pine, slash pine
	Longleaf pine	80	86	
	Slash pine	95	157	
WnB:				
Wicksburg	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
WnC:				
Wicksburg	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	

Table 9a.--Forestland Management (Part 1)

[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 potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: 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
AnA:									
Annemaine-----------	50	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50
Wahee---------------	40	Slight		Moderate		Slight		Poorly suited	
				Strength	0.50			Wetness	1.00
ArA:									
Ardilla-------------	90	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50
BnB:									
Benevolence---------	85	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
BnD:									
Benevolence---------	85	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
BOA:									
Bibb----------------	40	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
								Wetness	1.00
Osier---------------	30	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
		Sandiness	0.50					Wetness	1.00
								Sandiness	0.50
Kinston-------------	25	Severe		Severe		Slight		Poorly suited	
		Flooding	1.00	Strength	1.00			Flooding	1.00
		Strength	0.50					Wetness	1.00
								Strength	0.50
BuB:									
Buncombe------------	60	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
BuB:									
Bigbee	30	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
CdA:									
Clarendon	85	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
CoB:									
Cowarts	85	Slight		Moderate		Moderate		Well suited	
				Strength	0.50	Slope/erodibility	0.50		
DBA:									
Dorovan	40	Severe		Severe		Histosol: Not rated		Poorly suited	
		Strength	1.00	Strength	1.00	Histosol taxonomic order	1.00	Ponding	1.00
		Wetness	1.00	Wetness	0.50			Strength	1.00
								Wetness	1.00
Grady	35	Slight		Moderate		Slight		Poorly suited	
				Strength	0.50			Ponding	1.00
								Wetness	1.00
Byars	20	Slight		Moderate		Slight		Poorly suited	
				Strength	0.50			Ponding	1.00
								Wetness	1.00
DoA:									
Dothan	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
DoB:									
Dothan	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
DoC:									
Dothan	85	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
DsA:									
Dunbar	60	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
DsA:									
Goldsboro	30	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50
FaA:									
Faceville	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
FaB:									
Faceville	85	Slight		Moderate		Moderate		Well suited	
				Strength	0.50	Slope/erodibility	0.50		
FqB:									
Fuquay	85	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
GbA:									
Grady	60	Moderate		Moderate		Slight		Poorly suited	
		Strength	0.50	Strength	0.50			Ponding	1.00
								Wetness	1.00
Byars	30	Slight		Moderate		Slight		Poorly suited	
				Strength	0.50			Ponding	1.00
								Wetness	1.00
KeA:									
Kenansville	85	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
KhB:									
Kolomoki	60	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
Cahaba	30	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
LcB:									
Lucy	85	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
LcC:									
Lucy	85	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
LtE:									
Lucy----------------	60	Moderate		Moderate		Moderate		Poorly suited	
		Slope	0.50	Strength	0.50	Slope/erodibility	0.50	Slope	1.00
Troup---------------	30	Moderate		Moderate		Moderate		Poorly suited	
		Slope	0.50	Strength	0.50	Slope/erodibility	0.50	Slope	1.00
MIA:									
Mantachie-----------	35	Severe		Severe		Slight		Poorly suited	
		Flooding	1.00	Strength	1.00			Flooding	1.00
		Strength	0.50					Strength	0.50
Iuka----------------	30	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
Kinston-------------	25	Severe		Severe		Slight		Poorly suited	
		Flooding	1.00	Strength	1.00			Flooding	1.00
		Strength	0.50					Wetness	1.00
								Strength	0.50
MtA:									
Meggett-------------	90	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
								Wetness	1.00
NaB:									
Nankin--------------	90	Slight		Moderate		Moderate		Well suited	
				Strength	0.50	Slope/erodibility	0.50		
NcD:									
Nankin--------------	60	Slight		Moderate		Severe		Moderately suited	
				Strength	0.50	Slope/erodibility	0.95	Slope	0.50
Cowarts-------------	30	Slight		Moderate		Severe		Moderately suited	
				Strength	0.50	Slope/erodibility	0.95	Slope	0.50
NpE:									
Nankin--------------	40	Slight		Moderate		Severe		Poorly suited	
				Strength	0.50	Slope/erodibility	0.95	Slope	1.00
Lucy----------------	30	Slight		Moderate		Moderate		Poorly suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	1.00

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
NpE:									
Springhill----------	25	Slight		Moderate		Moderate		Poorly suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	1.00
NsE:									
Nankin--------------	50	Slight		Moderate		Severe		Poorly suited	
				Strength	0.50	Slope/erodibility	0.95	Slope	1.00
Springhill----------	30	Slight		Moderate		Moderate		Poorly suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	1.00
Henderson-----------	15	Slight		Moderate		Moderate		Poorly suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	1.00
OiA:									
Ocilla--------------	60	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50
Albany--------------	30	Moderate		Moderate		Slight		Moderately suited	
		Sandiness	0.50	Strength	0.50			Sandiness	0.50
								Wetness	0.50
OrA:									
Orangeburg----------	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
OrB:									
Orangeburg----------	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
OrC:									
Orangeburg----------	85	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
PaA:									
Pansey--------------	90	Slight		Moderate		Slight		Poorly suited	
				Strength	0.50			Wetness	1.00
								Ponding	0.50
PeA:									
Pansey--------------	90	Moderate		Moderate		Slight		Poorly suited	
		Flooding	0.50	Strength	0.50			Wetness	1.00
								Flooding	0.50

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
PmA:									
Plummer	90	Moderate		Moderate		Slight		Poorly suited	
		Sandiness	0.50	Strength	0.50			Wetness	1.00
								Sandiness	0.50
Pt:									
Pits, borrow	90	Not rated		Not rated		Not rated		Not rated	
RbA:									
Red Bay	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
RbB:									
Red Bay	90	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
RbC:									
Red Bay	85	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
RvB:									
Riverview	85	Moderate		Severe		Slight		Moderately suited	
		Flooding	0.50	Strength	1.00			Flooding	0.50
		Strength	0.50					Strength	0.50
TnB:									
Troup	60	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
Bonifay	30	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
TnC:									
Troup	60	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
Bonifay	30	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
TyB:									
Troup	60	Slight		Moderate		Slight		Well suited	
				Strength	0.50				

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		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	Rating class and limiting features	Value
TyB:									
Lucy----------------	30	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
UbA:									
Urban land----------	50	Not rated		Not rated		Not rated		Not rated	
Bibb----------------	30	Severe		Moderate		Slight		Poorly suited	
		Flooding	1.00	Strength	0.50			Flooding	1.00
								Wetness	1.00
Kinston-------------	20	Severe		Severe		Slight		Poorly suited	
		Flooding	1.00	Strength	1.00			Flooding	1.00
		Strength	0.50					Wetness	1.00
								Strength	0.50
UcA:									
Urban land----------	50	Not rated		Not rated		Not rated		Not rated	
Clarendon-----------	25	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
Ardilla-------------	20	Slight		Moderate		Slight		Moderately suited	
				Strength	0.50			Wetness	0.50
UdB:									
Urban land----------	50	Not rated		Not rated		Not rated		Not rated	
Dothan--------------	40	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
UrB:									
Urban land----------	50	Not rated		Not rated		Not rated		Not rated	
Red Bay-------------	40	Slight		Moderate		Slight		Well suited	
				Strength	0.50				
VaB:									
Varina--------------	90	Slight		Moderate		Moderate		Well suited	
				Strength	0.50	Slope/erodibility	0.50		
WnB:									
Wicksburg-----------	60	Slight		Moderate		Slight		Well suited	
				Strength	0.50				

Table 9a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Soil rutting hazard: 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
WnB:									
Nankin	30	Slight		Moderate		Moderate		Well suited	
				Strength	0.50	Slope/erodibility	0.50		
WnC:									
Wicksburg	50	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50
Nankin	40	Slight		Moderate		Moderate		Moderately suited	
				Strength	0.50	Slope/erodibility	0.50	Slope	0.50

Table 9b.--Forestland Management (Part 2)

[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 potential limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AnA:									
Annemaine	50	Well suited		Well suited		Well suited		Low	
Wahee	40	Poorly suited		Poorly suited		Well suited		High	
		Stickiness	0.75	Stickiness	0.50			Wetness	1.00
ArA:									
Ardilla	90	Well suited		Well suited		Well suited		High	
								Wetness	1.00
BnB:									
Benevolence	85	Well suited		Well suited		Well suited		Low	
BnD:									
Benevolence	85	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
BOA:									
Bibb	40	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Osier	30	Moderately suited		Well suited		Well suited		High	
		Sandiness	0.50					Wetness	1.00
Kinston	25	Well suited		Well suited		Well suited		High	
								Wetness	1.00
BuB:									
Buncombe	60	Well suited		Well suited		Well suited		Low	
Bigbee	30	Well suited		Well suited		Well suited		Low	
CdA:									
Clarendon	85	Well suited		Well suited		Well suited		Low	
CoB:									
Cowarts	85	Well suited		Well suited		Well suited		Low	

Table 9b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
DBA:									
Dorovan	40	Poorly suited		Unsuited		Unsuited		High	
		Wetness	0.75	Wetness	0.75	Wetness	1.00	Wetness	1.00
Grady	35	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Byars	20	Well suited		Well suited		Well suited		High	
								Wetness	1.00
DoA:									
Dothan	90	Well suited		Well suited		Well suited		Low	
DoB:									
Dothan	90	Well suited		Well suited		Well suited		Low	
DoC:									
Dothan	85	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
DsA:									
Dunbar	60	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Goldsboro	30	Well suited		Well suited		Well suited		Low	
FaA:									
Faceville	90	Well suited		Well suited		Well suited		Low	
FaB:									
Faceville	85	Well suited		Well suited		Well suited		Low	
FqB:									
Fuquay	85	Well suited		Well suited		Well suited		Low	
GbA:									
Grady	60	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Byars	30	Well suited		Well suited		Well suited		High	
								Wetness	1.00
KeA:									
Kenansville	85	Well suited		Well suited		Well suited		Low	

Table 9b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KhB:									
Kolomoki------------	60	Well suited		Well suited		Well suited		Low	
Cahaba--------------	30	Well suited		Well suited		Well suited		Low	
LcB:									
Lucy----------------	85	Well suited		Well suited		Well suited		Low	
LcC:									
Lucy----------------	85	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
LtE:									
Lucy----------------	60	Moderately suited		Poorly suited		Poorly suited		Low	
		Slope	0.50	Slope	0.50	Slope	0.50		
Troup---------------	30	Moderately suited		Poorly suited		Poorly suited		Low	
		Slope	0.50	Slope	0.50	Slope	0.50		
MIA:									
Mantachie-----------	35	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Iuka----------------	30	Well suited		Well suited		Well suited		Low	
Kinston-------------	25	Well suited		Well suited		Well suited		High	
								Wetness	1.00
MtA:									
Meggett-------------	90	Moderately suited		Well suited		Well suited		High	
		Stickiness	0.50					Wetness	1.00
NaB:									
Nankin--------------	90	Well suited		Well suited		Well suited		Low	
NcD:									
Nankin--------------	60	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Cowarts-------------	30	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						

Table 9b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NpE:									
Nankin	40	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Lucy	30	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Springhill	25	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
NsE:									
Nankin	50	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Springhill	30	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Henderson	15	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
		Rock fragments	0.50						
OiA:									
Ocilla	60	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Albany	30	Moderately suited		Well suited		Well suited		High	
		Sandiness	0.50					Wetness	1.00
OrA:									
Orangeburg	90	Well suited		Well suited		Well suited		Low	
OrB:									
Orangeburg	90	Well suited		Well suited		Well suited		Low	
OrC:									
Orangeburg	85	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
PaA:									
Pansey	90	Well suited		Well suited		Well suited		High	
								Wetness	1.00

Table 9b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
PeA:									
Pansey---------------	90	Well suited		Well suited		Well suited		High	
								Wetness	1.00
PmA:									
Plummer--------------	90	Moderately suited		Well suited		Well suited		High	
		Sandiness	0.50					Wetness	1.00
Pt:									
Pits, borrow---------	90	Not rated		Not rated		Not rated		Not rated	
RbA:									
Red Bay--------------	90	Well suited		Well suited		Well suited		Low	
RbB:									
Red Bay--------------	90	Well suited		Well suited		Well suited		Low	
RbC:									
Red Bay--------------	85	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
RvB:									
Riverview------------	85	Well suited		Well suited		Well suited		Low	
TnB:									
Troup----------------	60	Well suited		Well suited		Well suited		Low	
Bonifay--------------	30	Well suited		Well suited		Well suited		Low	
TnC:									
Troup----------------	60	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Bonifay--------------	30	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
TyB:									
Troup----------------	60	Well suited		Well suited		Well suited		Low	
Lucy-----------------	30	Well suited		Well suited		Well suited		Low	
UbA:									
Urban land-----------	50	Not rated		Not rated		Not rated		Not rated	

Table 9b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
UbA:									
Bibb	30	Well suited		Well suited		Well suited		High	
								Wetness	1.00
Kinston	20	Well suited		Well suited		Well suited		High	
								Wetness	1.00
UcA:									
Urban land	50	Not rated		Not rated		Not rated		Not rated	
Clarendon	25	Well suited		Well suited		Well suited		Low	
Ardilla	20	Well suited		Well suited		Well suited		High	
								Wetness	1.00
UdB:									
Urban land	50	Not rated		Not rated		Not rated		Not rated	
Dothan	40	Well suited		Well suited		Well suited		Low	
UrB:									
Urban land	50	Not rated		Not rated		Not rated		Not rated	
Red Bay	40	Well suited		Well suited		Well suited		Low	
VaB:									
Varina	90	Well suited		Well suited		Well suited		Low	
WnB:									
Wicksburg	60	Well suited		Well suited		Well suited		Low	
Nankin	30	Well suited		Well suited		Well suited		Low	
WnC:									
Wicksburg	50	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						
Nankin	40	Moderately suited		Well suited		Well suited		Low	
		Slope	0.50						

Table 10a.--Recreation (Part 1)

[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	Pct. of map unit	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
AnA:							
Annemaine	50	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Restricted permeability	0.96	Depth to saturated zone	0.98
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Restricted permeability	0.96
		Restricted permeability	0.96				
Wahee	40	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	Restricted permeability	0.96	Restricted permeability	0.96
		Restricted permeability	0.96				
ArA:							
Ardilla	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Depth to cemented pan	0.46
BnB:							
Benevolence	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.33	Too sandy	0.33	Too sandy	0.33
						Slope	0.28
BnD:							
Benevolence	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.33	Too sandy	0.33	Slope	1.00
		Slope	0.16	Slope	0.16	Too sandy	0.33
BOA:							
Bibb	40	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
Osier	30	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	Too sandy	0.89	Flooding	1.00
		Too sandy	0.89	Flooding	0.40	Too sandy	0.89
Kinston	25	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
BuB:							
Buncombe	60	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Too sandy	0.88	Flooding	1.00
		Too sandy	0.88	Flooding	0.40	Too sandy	0.88
						Slope	0.12

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
BuB:							
Bigbee	30	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Too sandy	0.81	Flooding	1.00
		Too sandy	0.81	Flooding	0.40	Too sandy	0.81
						Slope	0.12
CdA:							
Clarendon	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Too sandy	0.30	Depth to saturated zone	0.39
		Too sandy	0.30	Depth to saturated zone	0.19	Too sandy	0.30
CoB:							
Cowarts	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.85	Restricted permeability	0.85	Restricted permeability	0.85
						Slope	0.28
DBA:							
Dorovan	40	Not Rated		Not Rated		Not Rated	
Grady	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
Byars	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
DoA:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.91	Too sandy	0.91	Too sandy	0.91
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
DoB:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.91	Too sandy	0.91	Too sandy	0.91
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
DoC:							
Dothan	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.91	Too sandy	0.91	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Too sandy	0.91
						Restricted permeability	0.26
DsA:							
Dunbar	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
DsA:							
Goldsboro-----------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Too sandy	0.42	Too sandy	0.42	Too sandy	0.42
FaA:							
Faceville-----------	90	Not limited		Not limited		Not limited	
FaB:							
Faceville-----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.28
FqB:							
Fuquay--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
						Slope	0.12
GbA:							
Grady---------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
Byars---------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
KeA:							
Kenansville---------	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.84	Too sandy	0.84
		Too sandy	0.84				
KhB:							
Kolomoki------------	60	Very limited		Not limited		Not limited	
		Flooding	1.00				
Cahaba--------------	30	Very limited		Not limited		Not limited	
		Flooding	1.00				
LcB:							
Lucy----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
						Slope	0.12
LcC:							
Lucy----------------	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
						Too sandy	0.84
LtE:							
Lucy----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
LtE:							
Troup---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.88	Too sandy	0.88	Too sandy	0.88
MIA:							
Mantachie-----------	35	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	0.40	Flooding	1.00
Iuka----------------	30	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Kinston-------------	25	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
MtA:							
Meggett-------------	90	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	Restricted permeability	0.94	Flooding	1.00
		Restricted permeability	0.94	Flooding	0.40	Restricted permeability	0.94
NaB:							
Nankin--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
NcD:							
Nankin--------------	60	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.26
Cowarts-------------	30	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.15	Restricted permeability	0.15	Slope	1.00
		Slope	0.04	Slope	0.04	Restricted permeability	0.15
NpE:							
Nankin--------------	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Lucy----------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
Springhill----------	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
NsE:							
Nankin	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Springhill	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Henderson	15	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.98	Restricted permeability	0.98	Slope	1.00
		Slope	0.96	Slope	0.96	Content of large stones	1.00
		Content of large stones	0.02	Content of large stones	0.02	Restricted permeability	0.98
						Gravel content	0.29
OiA:							
Ocilla	60	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	0.70	Too sandy	0.70	Too sandy	0.70
Albany	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Depth to saturated zone	1.00	Too sandy	1.00
OrA:							
Orangeburg	90	Not limited		Not limited		Not limited	
OrB:							
Orangeburg	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
OrC:							
Orangeburg	85	Not limited		Not limited		Very limited	
						Slope	1.00
PaA:							
Pansey	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Restricted permeability	0.35	Restricted permeability	0.35	Restricted permeability	0.35
PeA:							
Pansey	90	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	Restricted permeability	0.35	Flooding	0.60
		Restricted permeability	0.35			Restricted permeability	0.35

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
PmA:							
Plummer	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Depth to saturated zone	1.00	Too sandy	1.00
Pt:							
Pits, borrow	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay	90	Not limited		Not limited		Not limited	
RbB:							
Red Bay	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
RbC:							
Red Bay	85	Not limited		Not limited		Very limited	
						Slope	1.00
RvB:							
Riverview	85	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60
						Slope	0.03
TnB:							
Troup	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88	Too sandy	0.88
						Slope	0.12
Bonifay	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88	Too sandy	0.88
						Slope	0.12
TnC:							
Troup	60	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.88	Too sandy	0.88	Slope	1.00
						Too sandy	0.88
Bonifay	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.88	Too sandy	0.88	Slope	1.00
						Too sandy	0.88
TyB:							
Troup	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.88	Too sandy	0.88	Too sandy	0.88
						Slope	0.12
Lucy	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
						Slope	0.12
UbA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Bibb	30	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

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
UbA:							
Kinston	20	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
UcA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Clarendon	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Too sandy	0.30	Depth to saturated zone	0.39
		Too sandy	0.30	Depth to saturated zone	0.19	Too sandy	0.30
Ardilla	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Depth to cemented pan	0.46
UdB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Dothan	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.91	Too sandy	0.91	Too sandy	0.91
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
						Slope	0.12
UrB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Red Bay	40	Not limited		Not limited		Somewhat limited	
						Slope	0.12
VaB:							
Varina	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
						Slope	0.28
WnB:							
Wicksburg	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
		Too sandy	0.76	Too sandy	0.76	Too sandy	0.76
						Slope	0.50
Nankin	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26

Table 10a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
WnC:							
Wicksburg-----------	50	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.96	Restricted permeability	0.96	Slope	1.00
		Too sandy	0.76	Too sandy	0.76	Restricted permeability	0.96
						Too sandy	0.76
Nankin--------------	40	Somewhat limited		Somewhat limited		Very limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	1.00
						Restricted permeability	0.26

Table 10b.--Recreation (Part 2)

[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	Pct. of map unit	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
AnA:							
Annemaine	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
Wahee	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
ArA:							
Ardilla	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Depth to cemented pan	0.46
						Droughty	0.04
BnB:							
Benevolence	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.33	Too sandy	0.33	Droughty	0.03
BnD:							
Benevolence	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.33	Too sandy	0.33	Slope	0.16
						Droughty	0.03
BOA:							
Bibb	40	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
Osier	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Too sandy	0.89	Too sandy	0.89	Depth to saturated zone	1.00
		Flooding	0.40	Flooding	0.40	Droughty	0.69
Kinston	25	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
BuB:							
Buncombe	60	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.88	Too sandy	0.88	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Droughty	0.96
Bigbee	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Droughty	0.54

Table 10b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
CdA:							
Clarendon-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.30	Too sandy	0.30	Depth to saturated zone	0.19
CoB:							
Cowarts-------------	85	Not limited		Not limited		Not limited	
DBA:							
Dorovan-------------	40	Not Rated		Not Rated		Not Rated	
Grady---------------	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
Byars---------------	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
DoA:							
Dothan--------------	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.91	Too sandy	0.91		
DoB:							
Dothan--------------	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.91	Too sandy	0.91		
DoC:							
Dothan--------------	85	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.91	Too sandy	0.91		
DsA:							
Dunbar--------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Goldsboro-----------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
		Too sandy	0.42	Too sandy	0.42		
FaA:							
Faceville-----------	90	Not limited		Not limited		Not limited	
FaB:							
Faceville-----------	85	Not limited		Not limited		Not limited	
FqB:							
Fuquay--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.63
GbA:							
Grady---------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 10b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
GbA:							
Byars---------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
KeA:							
Kenansville---------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.21
KhB:							
Kolomoki------------	60	Not limited		Not limited		Not limited	
Cahaba--------------	30	Not limited		Not limited		Not limited	
LcB:							
Lucy----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.10
LcC:							
Lucy----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.10
LtE:							
Lucy----------------	60	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
						Droughty	0.10
Troup---------------	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
						Droughty	0.91
MIA:							
Mantachie-----------	35	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
Iuka----------------	30	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.19
Kinston-------------	25	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
MtA:							
Meggett-------------	90	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
NaB:							
Nankin--------------	90	Not limited		Not limited		Not limited	
NcD:							
Nankin--------------	60	Not limited		Not limited		Somewhat limited	
						Slope	0.04

Table 10b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
NcD:							
Cowarts	30	Not limited		Not limited		Somewhat limited	
						Slope	0.04
NpE:							
Nankin	40	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Lucy	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Slope	0.96
						Droughty	0.10
Springhill	25	Not limited		Not limited		Somewhat limited	
						Slope	0.96
NsE:							
Nankin	50	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Springhill	30	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Henderson	15	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.02	Content of large stones	0.02	Content of large stones	1.00
						Slope	0.96
OiA:							
Ocilla	60	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	0.70	Too sandy	0.70	Droughty	0.12
Albany	30	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Droughty	0.92
						Too sandy	0.50
OrA:							
Orangeburg	90	Not limited		Not limited		Not limited	
OrB:							
Orangeburg	90	Not limited		Not limited		Not limited	
OrC:							
Orangeburg	85	Not limited		Not limited		Not limited	
PaA:							
Pansey	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
PeA:							
Pansey	90	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	0.60

Table 10b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
PmA:							
Plummer	90	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	1.00	Too sandy	1.00	Droughty	0.92
						Too sandy	0.50
Pt:							
Pits, borrow	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay	90	Not limited		Not limited		Not limited	
RbB:							
Red Bay	90	Not limited		Not limited		Not limited	
RbC:							
Red Bay	85	Not limited		Not limited		Not limited	
RvB:							
Riverview	85	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
TnB:							
Troup	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.91
Bonifay	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.89
TnC:							
Troup	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.91
Bonifay	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.89
TyB:							
Troup	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.91
Lucy	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.10
UbA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Bibb	30	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
Kinston	20	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
UcA:							
Urban land	50	Not Rated		Not Rated		Not Rated	

Table 10b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
UcA:							
Clarendon-----------	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.30	Too sandy	0.30	Depth to saturated zone	0.19
Ardilla-------------	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Depth to cemented pan	0.46
						Droughty	0.04
UdB:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Dothan--------------	40	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.91	Too sandy	0.91		
UrB:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Red Bay-------------	40	Not limited		Not limited		Not limited	
VaB:							
Varina--------------	90	Not limited		Not limited		Not limited	
WnB:							
Wicksburg-----------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76	Droughty	0.01
Nankin--------------	30	Not limited		Not limited		Not limited	
WnC:							
Wicksburg-----------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.76	Too sandy	0.76	Droughty	0.01
Nankin--------------	40	Not limited		Not limited		Not limited	

Table 11.--Wildlife Habitat

[See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
AnA:										
Annemaine	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Poor
Wahee	Fair	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
ArA:										
Ardilla	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor
BnB:										
Benevolence	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
BnD:										
Benevolence	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
BOA:										
Bibb	Poor	Poor	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Osier	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
Kinston	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Fair	Fair	Good
BuB:										
Buncombe	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor
Bigbee	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor
CdA:										
Clarendon	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
CoB:										
Cowarts	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
DBA:										
Dorovan	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Grady	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Byars	Poor	Poor	Poor	Fair	Poor	Good	Good	Poor	Fair	Good
DoA:										
Dothan	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
DoB:										
Dothan	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 11.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
DoC:										
Dothan	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
DsA:										
Dunbar	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Fair
Goldsboro	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
FaA:										
Faceville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
FaB:										
Faceville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
FqB:										
Fuquay	Fair	Fair	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
GbA:										
Grady	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Byars	Poor	Poor	Poor	Fair	Poor	Poor	Good	Poor	Poor	Good
KeA:										
Kenansville	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
KhB:										
Kolomoki	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Cahaba	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
LcB:										
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
LcC:										
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
LtE:										
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Troup	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Poor	Very poor
MIA:										
Mantachie	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair
Iuka	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
Kinston	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Good

Table 11.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
MtA:										
Meggett	Very poor	Poor	Poor	Fair	Fair	Good	Good	Fair	Good	Good
NaB:										
Nankin	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
NcD:										
Nankin	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cowarts	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
NpE:										
Nankin	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Springhill	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
NsE:										
Nankin	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Springhill	Fair	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Henderson	Fair	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
OiA:										
Ocilla	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Good	Fair
Albany	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Poor
OrA:										
Orangeburg	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
OrB:										
Orangeburg	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
OrC:										
Orangeburg	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
PaA:										
Pansey	Poor	Fair	Fair	Good	Fair	Good	Good	Fair	Good	Good
PeA:										
Pansey	Poor	Fair	Fair	Good	Fair	Good	Good	Fair	Good	Good
PmA:										
Plummer	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair

Table 11.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
Pt:										
Pits, borrow	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
RbA:										
Red Bay	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
RbB:										
Red Bay	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
RbC:										
Red Bay	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
RvB:										
Riverview	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
TnB:										
Troup	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Bonifay	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
TnC:										
Troup	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Bonifay	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
TyB:										
Troup	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Lucy	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
UbA:										
Urban land.										
Bibb	Poor	Poor	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Kinston	Very poor	Poor	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
UcA:										
Urban land.										
Clarendon	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Ardilla	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor
UdB:										
Urban land.										
Dothan	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 11.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
UrB: Urban land.										
Red Bay	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
VaB: Varina	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
WnB: Wicksburg	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Nankin	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
WnC: Wicksburg	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Nankin	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 12a.--Building Site Development (Part 1)

[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	Pct. of. map unit	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
AnA:							
Annemaine-----------	50	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Wahee---------------	40	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
ArA:							
Ardilla-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to thick cemented pan	0.46	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.46
BnB:							
Benevolence---------	85	Not limited		Not limited		Not limited	
BnD:							
Benevolence---------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
BOA:							
Bibb----------------	40	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
Osier---------------	30	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
Kinston-------------	25	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
BuB:							
Buncombe------------	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Bigbee--------------	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.82		

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
CdA:							
Clarendon	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
CoB:							
Cowarts	85	Not limited		Not limited		Not limited	
DBA:							
Dorovan	40	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of organic matter	1.00			Content of organic matter	1.00
Grady	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Byars	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
DoA:							
Dothan	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
DoB:							
Dothan	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
DoC:							
Dothan	85	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.95	Slope	0.50
DsA:							
Dunbar	60	Very limited		Very limited		Very limited	
		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
Goldsboro	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
FaA:							
Faceville	90	Not limited		Not limited		Not limited	
FaB:							
Faceville	85	Not limited		Not limited		Not limited	

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
FqB:							
Fuquay	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
GbA:							
Grady	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Byars	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
KeA:							
Kenansville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
KhB:							
Kolomoki	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Cahaba	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
LcB:							
Lucy	85	Not limited		Not limited		Not limited	
LcC:							
Lucy	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
LtE:							
Lucy	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Troup	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
MIA:							
Mantachie	35	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
Iuka	30	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
Kinston	25	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

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of. map unit	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
MtA:							
Meggett	90	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	1.00	Shrink-swell	1.00	Shrink-swell	1.00
NaB:							
Nankin	90	Not limited		Not limited		Not limited	
NcD:							
Nankin	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
Cowarts	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
NpE:							
Nankin	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Lucy	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Springhill	25	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
NsE:							
Nankin	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Springhill	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
Henderson	15	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.96	Slope	0.96	Slope	1.00
		Content of large stones	0.08	Content of large stones	0.08	Content of large stones	0.08
OiA:							
Ocilla	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Albany	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
OrA:							
Orangeburg	90	Not limited		Not limited		Not limited	
OrB:							
Orangeburg	90	Not limited		Not limited		Not limited	
OrC:							
Orangeburg	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
PaA:							
Pansey	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
PeA:							
Pansey	90	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
PmA:							
Plummer	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pt:							
Pits, borrow	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay	90	Not limited		Not limited		Not limited	
RbB:							
Red Bay	90	Not limited		Not limited		Not limited	
RbC:							
Red Bay	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
RvB:							
Riverview	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.95		
TnB:							
Troup	60	Not limited		Not limited		Not limited	
Bonifay	30	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
TnC:							
Troup	60	Not limited		Not limited		Somewhat limited	
						Slope	0.88
Bonifay	30	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.61	Slope	0.88
TyB:							
Troup	60	Not limited		Not limited		Not limited	
Lucy	30	Not limited		Not limited		Not limited	
UbA:							
Urban land	50	Not Rated		Not Rated		Not Rated	

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	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
UbA:							
Bibb	30	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
Kinston	20	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
UcA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Clarendon	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Ardilla	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to thick cemented pan	0.46	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.46
UdB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Dothan	40	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
UrB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Red Bay	40	Not limited		Not limited		Not limited	
VaB:							
Varina	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
WnB:							
Wicksburg	60	Not limited		Somewhat limited		Not limited	
				Shrink-swell	0.50		
Nankin	30	Not limited		Not limited		Not limited	
WnC:							
Wicksburg	50	Not limited		Somewhat limited		Somewhat limited	
				Shrink-swell	0.50	Slope	0.50
Nankin	40	Not limited		Not limited		Somewhat limited	
						Slope	0.50

Table 12b.--Building Site Development (Part 2)

[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	Pct. of map unit	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
AnA:							
Annemaine-----------	50	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	0.75	Cutbanks cave	0.10		
		Shrink-swell	0.50	Too clayey	0.03		
		Flooding	0.40				
Wahee---------------	40	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	Too clayey	0.72		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Flooding	0.40				
ArA:							
Ardilla-------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to thick cemented pan	1.00	Depth to saturated zone	1.00
		Depth to thick cemented pan	0.46	Depth to saturated zone	1.00	Depth to cemented pan	0.46
				Cutbanks cave	0.10	Droughty	0.04
BnB:							
Benevolence---------	85	Not limited		Somewhat limited		Somewhat limited	
				Cutbanks cave	0.10	Droughty	0.03
BnD:							
Benevolence---------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
				Cutbanks cave	0.10	Droughty	0.03
BOA:							
Bibb----------------	40	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
				Cutbanks cave	0.10		
Osier---------------	30	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	Droughty	0.69
Kinston-------------	25	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
		Low strength	1.00	Flooding	0.80		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
BuB:							
Buncombe	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80	Droughty	0.96
Bigbee	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Depth to saturated zone	0.82	Droughty	0.54
				Flooding	0.80		
CdA:							
Clarendon	85	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		
CoB:							
Cowarts	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
DBA:							
Dorovan	40	Very limited		Very limited		Not Rated	
		Ponding	1.00	Ponding	1.00		
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Subsidence	1.00	Content of organic matter	1.00		
				Cutbanks cave	0.10		
Grady	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Too clayey	0.88		
		Low strength	0.01	Cutbanks cave	0.10		
Byars	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Low strength	0.01				
DoA:							
Dothan	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
				Cutbanks cave	0.10		
DoB:							
Dothan	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
				Cutbanks cave	0.10		
DoC:							
Dothan	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
				Cutbanks cave	0.10		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
DsA:							
Dunbar	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Too clayey	0.12		
		Low strength	0.01	Cutbanks cave	0.10		
Goldsboro	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
				Cutbanks cave	0.10		
FaA:							
Faceville	90	Not limited		Somewhat limited		Not limited	
				Too clayey	0.12		
				Cutbanks cave	0.10		
FaB:							
Faceville	85	Not limited		Somewhat limited		Not limited	
				Too clayey	0.12		
				Cutbanks cave	0.10		
FqB:							
Fuquay	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.63
				Depth to saturated zone	0.61		
GbA:							
Grady	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Too clayey	0.88		
		Low strength	0.01	Cutbanks cave	0.10		
Byars	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Low strength	0.01				
KeA:							
Kenansville	85	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Cutbanks cave	1.00	Droughty	0.21
KhB:							
Kolomoki	60	Somewhat limited		Very limited		Not limited	
		Flooding	0.40	Cutbanks cave	1.00		
		Low strength	0.01	Too clayey	0.12		
Cahaba	30	Somewhat limited		Somewhat limited		Not limited	
		Flooding	0.40	Cutbanks cave	0.10		
LcB:							
Lucy	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.10

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
LcC:							
Lucy----------------	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.10
LtE:							
Lucy----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.10
Troup---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.91
MIA:							
Mantachie-----------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.94	Flooding	0.80	Depth to saturated zone	0.94
				Cutbanks cave	0.10		
Iuka----------------	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.19	Flooding	0.80	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
Kinston-------------	25	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
		Low strength	1.00	Flooding	0.80		
MtA:							
Meggett-------------	90	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
		Shrink-swell	1.00	Too clayey	0.28		
		Low strength	1.00	Cutbanks cave	0.10		
NaB:							
Nankin--------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
				Too clayey	0.03		
NcD:							
Nankin--------------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
				Too clayey	0.03		
Cowarts-------------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	0.10	Slope	0.04
				Slope	0.04		
NpE:							
Nankin--------------	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
				Cutbanks cave	0.10		
				Too clayey	0.03		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
NpE:							
Lucy	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.96	Cutbanks cave	1.00	Slope	0.96
				Slope	0.96	Droughty	0.10
Springhill	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
				Cutbanks cave	0.10		
NsE:							
Nankin	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
				Cutbanks cave	0.10		
				Too clayey	0.03		
Springhill	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
				Cutbanks cave	0.10		
Henderson	15	Somewhat limited		Very limited		Very limited	
		Slope	0.96	Cutbanks cave	1.00	Content of large stones	1.00
		Content of large stones	0.08	Slope	0.96	Slope	0.96
		Low strength	0.01	Too clayey	0.50		
				Content of large stones	0.08		
OiA:							
Ocilla	60	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	1.00	Droughty	0.12
Albany	30	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	1.00	Droughty	0.92
						Too sandy	0.50
OrA:							
Orangeburg	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
OrB:							
Orangeburg	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
OrC:							
Orangeburg	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
PaA:							
Pansey	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
				Cutbanks cave	0.10		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
PeA:							
Pansey--------------	90	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	0.60	Flooding	0.60
				Cutbanks cave	0.10		
PmA:							
Plummer-------------	90	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	1.00	Droughty	0.92
						Too sandy	0.50
Pt:							
Pits, borrow--------	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay-------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
RbB:							
Red Bay-------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
RbC:							
Red Bay-------------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
RvB:							
Riverview-----------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Low strength	0.78	Depth to saturated zone	0.95		
				Flooding	0.60		
TnB:							
Troup---------------	60	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.91
Bonifay-------------	30	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.89
				Depth to saturated zone	0.61		
TnC:							
Troup---------------	60	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.91
Bonifay-------------	30	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.89
				Depth to saturated zone	0.61		
TyB:							
Troup---------------	60	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.91
Lucy----------------	30	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.10

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
UbA:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Bibb----------------	30	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
				Cutbanks cave	0.10		
Kinston-------------	20	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
		Low strength	1.00	Flooding	0.80		
UcA:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Clarendon-----------	25	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		
Ardilla-------------	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to thick cemented pan	1.00	Depth to saturated zone	1.00
		Depth to thick cemented pan	0.46	Depth to saturated zone	1.00	Depth to cemented pan	0.46
				Cutbanks cave	0.10	Droughty	0.04
UdB:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Dothan--------------	40	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
				Cutbanks cave	0.10		
UrB:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Red Bay-------------	40	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
VaB:							
Varina--------------	90	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.01	Depth to saturated zone	0.61		
				Too clayey	0.28		
				Cutbanks cave	0.10		
WnB:							
Wicksburg-----------	60	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.01
Nankin--------------	30	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
				Too clayey	0.03		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
WnC:							
Wicksburg-----------	50	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.01
Nankin--------------	40	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
				Too clayey	0.03		

Table 13a.--Sanitary Facilities (Part 1)

[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	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
AnA:					
Annemaine	50	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40	Seepage	0.32
Wahee	40	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40	Seepage	0.32
ArA:					
Ardilla	90	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
BnB:					
Benevolence	85	Not limited		Very limited	
				Seepage	1.00
				Slope	0.18
BnD:					
Benevolence	85	Somewhat limited		Very limited	
		Slope	0.16	Seepage	1.00
				Slope	1.00
BOA:					
Bibb	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Osier	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BOA:					
Kinston	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	0.50
		Restricted permeability	0.50		
BuB:					
Buncombe	60	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
		Restricted permeability	0.50		
Bigbee	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
		Filtering capacity	1.00		
				Slope	0.08
CdA:					
Clarendon	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
CoB:					
Cowarts	85	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.18
DBA:					
Dorovan	40	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Content of organic matter	1.00
		Filtering capacity	1.00		
				Seepage	0.50
		Restricted permeability	0.50		
Grady	35	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		
Byars	20	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
DoA:					
Dothan	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
DoB:					
Dothan	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.32
DoC:					
Dothan	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Slope	0.92
				Seepage	0.50
DsA:					
Dunbar	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00		
Goldsboro	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
FaA:					
Faceville	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.32	Seepage	0.68
FaB:					
Faceville	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.32	Seepage	0.68
				Slope	0.18
FqB:					
Fuquay	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Restricted permeability	0.50	Slope	0.08
GbA:					
Grady	60	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
GbA:					
Byars---------------	30	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		
KeA:					
Kenansville---------	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Flooding	0.40	Flooding	0.40
KhB:					
Kolomoki------------	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40		
Cahaba--------------	30	Somewhat limited		Very limited	
		Flooding	0.40	Seepage	1.00
				Flooding	0.40
LcB:					
Lucy----------------	85	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08
LcC:					
Lucy----------------	85	Not limited		Very limited	
				Seepage	1.00
				Slope	1.00
LtE:					
Lucy----------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Troup---------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
MIA:					
Mantachie-----------	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.46	Seepage	0.53
Iuka----------------	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MlA:					
Kinston	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	0.50
		Restricted permeability	0.50		
MtA:					
Meggett	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
NaB:					
Nankin	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.92
				Slope	0.32
NcD:					
Nankin	60	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.50
		Slope	0.04		
Cowarts	30	Somewhat limited		Very limited	
		Restricted permeability	0.98	Slope	1.00
				Seepage	0.50
		Slope	0.04		
NpE:					
Nankin	40	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.50
		Slope	0.96		
Lucy	30	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
				Seepage	1.00
Springhill	25	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
				Seepage	1.00
NsE:					
Nankin	50	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.50
		Slope	0.96		
Springhill	30	Somewhat limited		Very limited	
		Slope	0.96	Slope	1.00
				Seepage	1.00

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
NsE:					
Henderson-----------	15	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.96	Content of large stones	0.78
		Content of large stones	0.08		
OiA:					
Ocilla--------------	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50		
Albany--------------	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.68		
OrA:					
Orangeburg----------	90	Not limited		Very limited	
				Seepage	1.00
OrB:					
Orangeburg----------	90	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
OrC:					
Orangeburg----------	85	Not limited		Very limited	
				Slope	1.00
				Seepage	1.00
PaA:					
Pansey--------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	1.00
		Ponding	1.00	Ponding	1.00
PeA:					
Pansey--------------	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	1.00

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
PmA:					
Plummer-------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.68		
Pt:					
Pits, borrow--------	90	Not Rated		Not Rated	
RbA:					
Red Bay-------------	90	Not limited		Very limited	
				Seepage	1.00
RbB:					
Red Bay-------------	90	Not limited		Very limited	
				Seepage	1.00
				Slope	0.32
RbC:					
Red Bay-------------	85	Not limited		Very limited	
				Slope	1.00
				Seepage	1.00
RvB:					
Riverview-----------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
				Slope	0.02
TnB:					
Troup---------------	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
Bonifay-------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Depth to saturated zone	0.71
		Depth to saturated zone	1.00	Slope	0.08
		Restricted permeability	0.50		
TnC:					
Troup---------------	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
Bonifay-------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Restricted permeability	0.50		

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
TyB:					
Troup---------------	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
Lucy----------------	30	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08
UbA:					
Urban land----------	50	Not Rated		Not Rated	
Bibb----------------	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Kinston-------------	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	0.50
		Restricted permeability	0.50		
UcA:					
Urban land----------	50	Not Rated		Not Rated	
Clarendon-----------	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
Ardilla-------------	20	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.01
UdB:					
Urban land----------	50	Not Rated		Not Rated	
Dothan--------------	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.08
UrB:					
Urban land----------	50	Not Rated		Not Rated	
Red Bay-------------	40	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
VaB:					
Varina	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Depth to saturated zone	0.71
		Depth to saturated zone	1.00	Slope	0.18
				Seepage	0.01
WnB:					
Wicksburg	60	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.32
Nankin	30	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.32
WnC:					
Wicksburg	50	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	0.92
Nankin	40	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.92
				Seepage	0.50

Table 13b.--Sanitary Facilities (Part 2)

[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	Pct. of map unit	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
AnA:							
Annemaine	50	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	Flooding	0.40	Depth to saturated zone	1.00
		Flooding	0.40				
Wahee	40	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	Flooding	0.40	Too clayey	1.00
		Flooding	0.40				
ArA:							
Ardilla	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to thick cemented pan	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BnB:							
Benevolence	85	Not limited		Very limited		Somewhat limited	
				Seepage	1.00	Seepage	0.63
BnD:							
Benevolence	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Seepage	1.00	Seepage	0.63
				Slope	0.16	Slope	0.16
BOA:							
Bibb	40	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		
Osier	30	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
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00				
Kinston	25	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
		Seepage	1.00				
		Too clayey	0.50				
BuB:							
Buncombe	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Too Sandy	1.00	Seepage	1.00	Too Sandy	0.50

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
BuB:							
Bigbee	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00		
		Too Sandy	1.00				
CdA:							
Clarendon	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
CoB:							
Cowarts	85	Not limited		Not limited		Not limited	
DBA:							
Dorovan	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00			Content of organic matter	1.00
		Content of organic matter	1.00				
Grady	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50			Too clayey	0.50
Byars	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50				
DoA:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11
DoB:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11
DoC:							
Dothan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11
DsA:							
Dunbar	60	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	0.50				
Goldsboro	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
FaA:							
Faceville-----------	90	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
FaB:							
Faceville-----------	85	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
FqB:							
Fuquay--------------	85	Not limited		Very limited		Not limited	
				Seepage	1.00		
GbA:							
Grady---------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50			Too clayey	0.50
Byars---------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too clayey	0.50				
KeA:							
Kenansville---------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.40	Too Sandy	0.50
		Flooding	0.40				
KhB:							
Kolomoki------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Flooding	0.40	Seepage	1.00
		Too Sandy	1.00			Too Sandy	0.50
		Flooding	0.40			Too clayey	0.50
Cahaba--------------	30	Very limited		Somewhat limited		Not limited	
		Seepage	1.00	Flooding	0.40		
		Flooding	0.40				
LcB:							
Lucy----------------	85	Not limited		Very limited		Not limited	
				Seepage	1.00		
LcC:							
Lucy----------------	85	Not limited		Very limited		Not limited	
				Seepage	1.00		
LtE:							
Lucy----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Slope	1.00
				Slope	1.00		
Troup---------------	30	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Too Sandy	1.00
		Slope	1.00	Slope	1.00	Seepage	1.00
						Slope	1.00

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
MIA:							
Mantachie	35	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		
Iuka	30	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Kinston	25	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
		Seepage	1.00				
		Too clayey	0.50				
MtA:							
Meggett	90	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				
NaB:							
Nankin	90	Not limited		Not limited		Not limited	
NcD:							
Nankin	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
Cowarts	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.04	Slope	0.04	Slope	0.04
NpE:							
Nankin	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
Lucy	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.96	Seepage	1.00	Slope	0.96
				Slope	0.96		
Springhill	25	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Slope	0.96	Slope	0.96
		Slope	0.96				
NsE:							
Nankin	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
Springhill	30	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Slope	0.96	Slope	0.96
		Slope	0.96				
Henderson	15	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.96	Slope	0.96	Slope	0.96
		Too clayey	0.50			Content of large stones	0.08
		Content of large stones	0.08				

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
OiA:							
Ocilla--------------	60	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	1.00		
Albany--------------	30	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	1.00	Seepage	1.00	Too Sandy	1.00
						Seepage	1.00
OrA:							
Orangeburg----------	90	Not limited		Not limited		Not limited	
OrB:							
Orangeburg----------	90	Not limited		Not limited		Not limited	
OrC:							
Orangeburg----------	85	Not limited		Not limited		Not limited	
PaA:							
Pansey--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
PeA:							
Pansey--------------	90	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		
PmA:							
Plummer-------------	90	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	1.00	Seepage	1.00	Too Sandy	1.00
						Seepage	1.00
Pt:							
Pits, borrow--------	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay-------------	90	Not limited		Not limited		Not limited	
RbB:							
Red Bay-------------	90	Not limited		Not limited		Not limited	
RbC:							
Red Bay-------------	85	Not limited		Not limited		Not limited	
RvB:							
Riverview-----------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Seepage	0.50
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	0.50
		Too Sandy	1.00	Seepage	1.00	Depth to saturated zone	0.11
		Seepage	1.00				

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
TnB:							
Troup	60	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Too Sandy	1.00
						Seepage	1.00
Bonifay	30	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
						Too Sandy	0.50
TnC:							
Troup	60	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Too Sandy	1.00
						Seepage	1.00
Bonifay	30	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
						Too Sandy	0.50
TyB:							
Troup	60	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Too Sandy	1.00
						Seepage	1.00
Lucy	30	Not limited		Very limited		Not limited	
				Seepage	1.00		
UbA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Bibb	30	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		
Kinston	20	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
		Seepage	1.00				
		Too clayey	0.50				
UcA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Clarendon	25	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
Ardilla	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to thick cemented pan	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
UdB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Dothan	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
UrB:							
Urban land----------	50	Not Rated		Not Rated		Not Rated	
Red Bay-------------	40	Not limited		Not limited		Not limited	
VaB:							
Varina--------------	90	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
WnB:							
Wicksburg-----------	60	Somewhat limited		Very limited		Somewhat limited	
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
Nankin--------------	30	Not limited		Not limited		Not limited	
WnC:							
Wicksburg-----------	50	Somewhat limited		Very limited		Somewhat limited	
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
Nankin--------------	40	Not limited		Not limited		Not limited	

Table 14a.--Construction Materials (Part 1)

[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	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AnA:					
Annemaine-----------	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Wahee---------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
ArA:					
Ardilla-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BnB:					
Benevolence---------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BnD:					
Benevolence---------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BOA:					
Bibb----------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Osier---------------	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.63
		Thickest layer	0.00		
Kinston-------------	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.15
BuB:					
Buncombe------------	60	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
Bigbee--------------	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.69
		Thickest layer	0.00	Thickest layer	0.92
CdA:					
Clarendon-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
CoB:					
Cowarts	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DBA:					
Dorovan	40	Not Rated		Fair	
		Bottom layer	0.00	Thickest layer	0.00
				Bottom layer	0.55
Grady	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Byars	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DoA:					
Dothan	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DoB:					
Dothan	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DoC:					
Dothan	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DsA:					
Dunbar	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Goldsboro	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
FaA:					
Faceville	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
FaB:					
Faceville	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
FqB:					
Fuquay	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95
GbA:					
Grady	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
GbA:					
Byars---------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
KeA:					
Kenansville---------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.10
		Thickest layer	0.00	Thickest layer	0.93
KhB:					
Kolomoki------------	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Cahaba--------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LcB:					
Lucy----------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.93
LcC:					
Lucy----------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.93
LtE:					
Lucy----------------	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.93
Troup---------------	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
MIA:					
Mantachie-----------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Iuka----------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Kinston-------------	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
MtA:					
Meggett-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NaB:					
Nankin--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
NcD:					
Nankin--------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Cowarts-------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NpE:					
Nankin--------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Lucy----------------	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95
Springhill----------	25	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NsE:					
Nankin--------------	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Springhill----------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Henderson-----------	15	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OiA:					
Ocilla--------------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Albany--------------	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
OrA:					
Orangeburg----------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OrB:					
Orangeburg----------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OrC:					
Orangeburg----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
PaA:					
Pansey--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PeA:					
Pansey--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PmA:					
Plummer-------------	90	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
Pt:					
Pits, borrow--------	90	Not rated		Not rated	
RbA:					
Red Bay-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
RbB:					
Red Bay-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
RbC:					
Red Bay-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
RvB:					
Riverview-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
TnB:					
Troup---------------	60	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
Bonifay-------------	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
TnC:					
Troup---------------	60	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
Bonifay-------------	30	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		
TyB:					
Troup---------------	60	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00		

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
TyB:					
Lucy----------------	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.93
UbA:					
Urban land----------	50	Not rated		Not rated	
Bibb----------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Kinston-------------	20	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
UcA:					
Urban land----------	50	Not rated		Not rated	
Clarendon-----------	25	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Ardilla-------------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
UdB:					
Urban land----------	50	Not rated		Not rated	
Dothan--------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
UrB:					
Urban land----------	50	Not rated		Not rated	
Red Bay-------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
VaB:					
Varina--------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
WnB:					
Wicksburg-----------	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.86
Nankin--------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
WnC:					
Wicksburg-----------	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.86
Nankin--------------	40	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14b.--Construction Materials (Part 2)

[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	Pct. of map unit	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
AnA:							
Annemaine-----------	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Depth to saturated zone	0.14	Depth to saturated zone	0.14
		Too acid	0.32	Shrink-swell	0.99	Too acid	0.88
		Water erosion	0.99				
Wahee---------------	40	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.12	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.91	Too acid	0.59
ArA:							
Ardilla-------------	90	Fair		Poor		Poor	
		Droughty	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12	Depth to cemented pan	0.00	Depth to cemented pan	0.54
		Too acid	0.50			Too acid	0.98
		Depth to cemented pan	0.54				
BnB:							
Benevolence---------	85	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.88
		Low content of organic matter	0.12				
		Too acid	0.32				
BnD:							
Benevolence---------	85	Poor		Good		Fair	
		Wind erosion	0.00			Slope	0.84
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
BOA:							
Bibb----------------	40	Fair		Poor		Poor	
		Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.99			Too acid	0.59
Osier---------------	30	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
		Wind erosion	0.00			Depth to saturated zone	0.00
		Too acid	0.20			Too acid	0.76
		Droughty	0.51				
Kinston-------------	25	Fair		Poor		Poor	
		Too acid	0.32	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.99	Low strength	0.00	Too acid	0.88

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
BuB:							
Buncombe------------	60	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Low content of organic matter	0.12				
		Too acid	0.68				
		Droughty	0.98				
Bigbee--------------	30	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
		Droughty	0.99				
CdA:							
Clarendon-----------	85	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
CoB:							
Cowarts-------------	85	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.50				
DBA:							
Dorovan-------------	40	Poor		Poor		Not Rated	
		Wind erosion	0.00	Depth to saturated zone	0.00		
		Too acid	0.00				
Grady---------------	35	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.89	Depth to saturated zone	0.00
		Too acid	0.50	Low strength	0.99	Too acid	0.59
Byars---------------	20	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too clayey	0.18	Shrink-swell	0.90	Too clayey	0.10
		Too acid	0.50	Low strength	0.99	Too acid	0.59
DoA:							
Dothan--------------	90	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
DoB:							
Dothan--------------	90	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
DoC:							
Dothan	85	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
DsA:							
Dunbar	60	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12	Shrink-swell	0.91	Too clayey	0.00
		Too acid	0.50	Low strength	0.99	Too acid	0.88
Goldsboro	30	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.14	Depth to saturated zone	0.14
		Too acid	0.08			Too acid	0.50
		Low content of organic matter	0.12				
FaA:							
Faceville	90	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
FaB:							
Faceville	85	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
FqB:							
Fuquay	85	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Low content of organic matter	0.12				
		Too acid	0.54				
GbA:							
Grady	60	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.89	Depth to saturated zone	0.00
		Too acid	0.50	Low strength	0.99	Too acid	0.59
Byars	30	Fair		Poor		Poor	
		Too clayey	0.08	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12	Shrink-swell	0.90	Too clayey	0.05
		Too acid	0.50	Low strength	0.99	Too acid	0.59

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
KeA:							
Kenansville	85	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Low content of organic matter	0.00			Too acid	0.98
		Too sandy	0.01				
		Too acid	0.54				
		Droughty	0.62				
KhB:							
Kolomoki	60	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Low content of organic matter	0.00			Too acid	0.98
		Too acid	0.54				
		Droughty	0.99				
Cahaba	30	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.98
		Too acid	0.54				
LcB:							
Lucy	85	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Low content of organic matter	0.00				
		Too sandy	0.01				
		Too acid	0.50				
LcC:							
Lucy	85	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Low content of organic matter	0.00				
		Too sandy	0.01				
		Too acid	0.50				
LtE:							
Lucy	60	Poor		Good		Poor	
		Wind erosion	0.00			Slope	0.00
		Low content of organic matter	0.00			Too sandy	0.01
		Too sandy	0.01				
		Too acid	0.50				
Troup	30	Poor		Good		Poor	
		Wind erosion	0.00			Slope	0.00
		Too sandy	0.01			Too sandy	0.00
		Low content of organic matter	0.12				
		Too acid	0.54				
MIA:							
Mantachie	35	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.04	Depth to saturated zone	0.04
		Low content of organic matter	0.50			Too acid	0.88

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
MIA:							
Iuka----------------	30	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Low content of organic matter	0.50			Too acid	0.88
Kinston-------------	25	Fair		Poor		Poor	
		Too acid	0.32	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.99	Low strength	0.00	Too acid	0.88
MtA:							
Meggett-------------	90	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12	Low strength	0.00	Too clayey	0.00
		Too acid	0.68	Shrink-swell	0.21		
NaB:							
Nankin--------------	90	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Too acid	0.88
		Too acid	0.50				
NcD:							
Nankin--------------	60	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
						Too acid	0.88
		Too clayey	0.00			Slope	0.96
		Too acid	0.50				
Cowarts-------------	30	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
						Slope	0.96
		Too acid	0.50				
NpE:							
Nankin--------------	40	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
						Slope	0.04
		Too clayey	0.00			Too acid	0.88
		Too acid	0.50				
Lucy----------------	30	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Low content of organic matter	0.00			Slope	0.04
		Too sandy	0.00				
		Too acid	0.50				
Springhill----------	25	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
						Too acid	0.88
		Too acid	0.32				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
NsE:							
Nankin	50	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Slope	0.04
		Too acid	0.50			Too acid	0.88
Springhill	30	Fair		Good		Fair	
		Low content of organic matter	0.12			Slope	0.04
		Too acid	0.32			Too acid	0.88
Henderson	15	Poor		Fair		Poor	
		Too clayey	0.00	Cobble content	0.13	Too clayey	0.00
		Low content of organic matter	0.12	Low strength	0.99	Hard to reclaim	0.00
						Rock fragments	0.00
		Too acid	0.32			Slope	0.04
		Cobble content	0.92			Too acid	0.88
OiA:							
Ocilla	60	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too sandy	0.07			Too sandy	0.07
		Too acid	0.32				
		Low content of organic matter	0.50				
Albany	30	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
		Wind erosion	0.00			Depth to saturated zone	0.00
		Too acid	0.12			Too acid	0.59
		Low content of organic matter	0.50				
OrA:							
Orangeburg	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
OrB:							
Orangeburg	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
OrC:							
Orangeburg	85	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
PaA:							
Pansey	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.50			Too acid	0.88

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
PeA:							
Pansey--------------	90	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.50			Too acid	0.88
PmA:							
Plummer-------------	90	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
		Wind erosion	0.00			Depth to saturated zone	0.00
		Too acid	0.12			Too acid	0.59
		Low content of organic matter	0.50				
		Droughty	0.95				
Pt:							
Pits, borrow--------	90	Not Rated		Not Rated		Not Rated	
RbA:							
Red Bay-------------	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
RbB:							
Red Bay-------------	90	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
RbC:							
Red Bay-------------	85	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
RvB:							
Riverview-----------	85	Fair		Good		Fair	
		Too acid	0.54			Too acid	0.98
		Low content of organic matter	0.88				
TnB:							
Troup---------------	60	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.01				
		Low content of organic matter	0.12				
		Too acid	0.54				
Bonifay-------------	30	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Low content of organic matter	0.12				
		Too acid	0.74				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
TnC:							
Troup	60	Poor Wind erosion Too sandy Low content of organic matter Too acid	 0.00 0.01 0.12 0.54	Good		Poor Too sandy	 0.00
Bonifay	30	Poor Wind erosion Too sandy Low content of organic matter Too acid	 0.00 0.00 0.12 0.74	Good		Poor Too sandy	 0.00
TyB:							
Troup	60	Poor Wind erosion Too sandy Low content of organic matter Too acid	 0.00 0.01 0.12 0.54	Good		Fair Too sandy	 0.01
Lucy	30	Poor Wind erosion Low content of organic matter Too sandy Too acid	 0.00 0.00 0.01 0.50	Good		Fair Too sandy	 0.01
UbA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Bibb	30	Fair Too acid Water erosion	 0.50 0.99	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Too acid	 0.00 0.59
Kinston	20	Fair Too acid Water erosion	 0.32 0.99	Poor Depth to saturated zone Low strength	 0.00 0.00	Poor Depth to saturated zone Too acid	 0.00 0.88
UcA:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Clarendon	25	Poor Wind erosion Low content of organic matter Too acid	 0.00 0.00 0.32	Fair Depth to saturated zone	 0.53	Fair Depth to saturated zone Too acid	 0.53 0.88
Ardilla	20	Fair Droughty Too acid Low content of organic matter Depth to cemented pan	 0.12 0.50 0.50 0.54	Poor Depth to cemented pan Depth to saturated zone	 0.00 0.00	Poor Depth to saturated zone Depth to cemented pan Too acid	 0.00 0.54 0.98

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	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
UdB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Dothan	40	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
UrB:							
Urban land	50	Not Rated		Not Rated		Not Rated	
Red Bay	40	Fair		Good		Fair	
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
VaB:							
Varina	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.99	Too clayey	0.00
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.32				
WnB:							
Wicksburg	60	Poor		Fair		Fair	
		Wind erosion	0.00	Shrink-swell	0.99	Too sandy	0.04
		Low content of organic matter	0.00	Low strength	0.99	Too acid	0.98
		Too sandy	0.04				
		Too acid	0.50				
Nankin	30	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Too acid	0.88
		Too acid	0.50				
WnC:							
Wicksburg	50	Poor		Fair		Fair	
		Wind erosion	0.00	Shrink-swell	0.99	Too sandy	0.04
		Low content of organic matter	0.00	Low strength	0.99	Too acid	0.98
		Too sandy	0.04				
		Too acid	0.50				
Nankin	40	Poor		Good		Poor	
		Low content of organic matter	0.00			Too clayey	0.00
		Too clayey	0.00			Too acid	0.88
		Too acid	0.50				

Table 15.--Water Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
AnA:							
Annemaine	Moderate: seepage	Severe: hard to pack wetness	Severe: slow refill	Limitation: percs slowly	Limitation: percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly
Wahee	Slight	Severe: hard to pack wetness	Severe: slow refill	Limitation: percs slowly	Limitation: wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness
ArA:							
Ardilla	Moderate: seepage	Severe: wetness	Severe: slow refill	Favorable	Limitation: wetness	Limitation: wetness	Limitation: wetness
BnB:							
Benevolence	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
BnD:							
Benevolence	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
BOA:							
Bibb	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding	Limitation: wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
Osier	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty
Kinston	Moderate: seepage	Severe: wetness	Slight	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness
BuB:							
Buncombe	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth droughty

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
BuB:							
Bigbee	Severe: seepage	Severe: seepage piping	Severe: cutbanks cave	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy	Limitation: droughty
CdA:							
Clarendon	Moderate: seepage	Severe: piping	Severe: slow refill cutbanks cave	Favorable	Limitation: fast intake wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
CoB:							
Cowarts	Moderate: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: percs slowly soil blowing	Limitation: rooting depth droughty
DBA:							
Dorovan	Moderate: seepage	Severe: excess humus ponding	Severe: cutbanks cave	Limitation: flooding subsides ponding	Limitation: flooding soil blowing ponding	Limitation: soil blowing ponding	Limitation: wetness
Grady	Slight	Severe: ponding	Severe: slow refill	Limitation: percs slowly ponding	Limitation: percs slowly soil blowing ponding	Limitation: percs slowly soil blowing ponding	Limitation: percs slowly wetness
Byars	Slight	Severe: hard to pack ponding	Severe: slow refill	Limitation: percs slowly ponding	Limitation: percs slowly ponding	Limitation: percs slowly ponding	Limitation: percs slowly wetness
DoA:							
Dothan	Moderate: seepage	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Favorable	Limitation: droughty
DoB:							
Dothan	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Favorable	Limitation: droughty

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
DoC:							
Dothan	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Favorable	Limitation: droughty
DsA:							
Dunbar	Slight	Severe: wetness	Severe: slow refill	Favorable	Limitation: wetness	Limitation: wetness soil blowing	Limitation: wetness
Goldsboro	Moderate: seepage	Moderate: piping wetness	Moderate: slow refill deep to water	Limitation: too acid	Limitation: fast intake wetness droughty	Limitation: wetness soil blowing	Limitation: rooting depth droughty
FaA:							
Faceville	Moderate: seepage	Slight	Severe: no water	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
FaB:							
Faceville	Moderate: seepage slope	Slight	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily
FqB:							
Fuquay	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
GbA:							
Grady	Slight	Severe: ponding	Severe: slow refill	Limitation: percs slowly ponding	Limitation: percs slowly soil blowing ponding	Limitation: percs slowly soil blowing ponding	Limitation: percs slowly wetness
Byars	Slight	Severe: hard to pack ponding	Severe: slow refill	Limitation: percs slowly ponding	Limitation: percs slowly ponding	Limitation: percs slowly ponding	Limitation: percs slowly wetness
KeA:							
Kenansville	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Irrigation	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
KhB:							
Kolomoki	Severe: seepage	Severe: thin layer	Severe: no water	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
Cahaba	Severe: seepage	Moderate: piping thin layer	Severe: no water	Limitation: deep to water	Favorable	Favorable	Favorable
LcB:							
Lucy	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
LcC:							
Lucy	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
LtE:							
Lucy	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Troup	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
MIA:							
Mantachie	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness
Iuka	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness
Kinston	Moderate: seepage	Severe: wetness	Slight	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
MtA:							
Meggett	Slight	Severe: hard to pack wetness	Severe: slow refill	Limitation: percs slowly	Limitation: percs slowly rooting depth wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness
NaB:							
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
NcD:							
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Cowarts	Severe: slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: percs slowly slope soil blowing	Limitation: rooting depth slope droughty
NpE:							
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Lucy	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope droughty
Springhill	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope	Limitation: slope	Limitation: slope
NsE:							
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
Springhill	Severe: seepage slope	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope	Limitation: slope	Limitation: slope

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
NsE:							
Henderson	Severe: slope	Moderate: hard to pack large stones	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope	Limitation: large stones percs slowly slope	Limitation: large stones percs slowly slope
OiA:							
Ocilla	Severe: seepage	Severe: piping wetness	Severe: cutbanks cave	Favorable	Limitation: fast intake wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
Albany	Severe: seepage	Severe: seepage piping wetness	Severe: slow refill cutbanks cave	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: wetness soil blowing	Limitation: wetness droughty
OrA:							
Orangeburg	Moderate: seepage	Moderate: piping	Severe: no water	Limitation: deep to water	Favorable	Limitation: soil blowing	Favorable
OrB:							
Orangeburg	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: soil blowing	Favorable
OrC:							
Orangeburg	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: soil blowing	Favorable
PaA:							
Pansey	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding percs slowly	Limitation: flooding percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness
PeA:							
Pansey	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding percs slowly	Limitation: flooding percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
PmA:							
Plummer	Severe: seepage	Severe: seepage piping wetness	Severe: cutbanks cave	Limitation: cutbanks cave	Limitation: fast intake wetness	Limitation: too sandy wetness soil blowing	Limitation: wetness droughty
Pt:							
Pits, borrow	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
RbA:							
Red Bay	Moderate: seepage	Slight	Severe: no water	Limitation: deep to water	Favorable	Favorable	Favorable
RbB:							
Red Bay	Moderate: seepage slope	Slight	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
RbC:							
Red Bay	Moderate: seepage slope	Slight	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
RvB:							
Riverview	Severe: seepage	Severe: piping	Severe: cutbanks cave	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
TnB:							
Troup	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
Bonifay	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: droughty
TnC:							
Troup	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
Bonifay	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: droughty

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
TyB:							
Troup	Severe: seepage	Severe: seepage piping	Severe: no water	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: droughty
Lucy	Severe: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: droughty
UbA:							
Urban land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Bibb	Moderate: seepage	Severe: piping wetness	Moderate: slow refill	Limitation: flooding	Limitation: wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
Kinston	Moderate: seepage	Severe: wetness	Slight	Limitation: flooding	Limitation: flooding wetness	Limitation: wetness	Limitation: wetness
UcA:							
Urban land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Clarendon	Moderate: seepage	Severe: piping	Severe: slow refill cutbanks cave	Favorable	Limitation: fast intake wetness droughty	Limitation: wetness soil blowing	Limitation: droughty
Ardilla	Moderate: seepage	Severe: wetness	Severe: slow refill	Favorable	Limitation: wetness	Limitation: wetness	Limitation: wetness
UdB:							
Urban land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable
Dothan	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: fast intake slope droughty	Favorable	Limitation: droughty
UrB:							
Urban land	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable	Limitation: variable

Table 15.--Water Management--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
UrB:							
Red Bay	Moderate: seepage slope	Slight	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
VaB:							
Varina	Slight	Moderate: hard to pack	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: soil blowing	Favorable
WnB:							
Wicksburg	Severe: seepage	Moderate: hard to pack piping	Severe: no water	Limitation: deep to water	Limitation: fast intake percs slowly droughty	Limitation: percs slowly	Limitation: percs slowly droughty
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
WnC:							
Wicksburg	Severe: seepage	Moderate: hard to pack piping	Severe: no water	Limitation: deep to water	Limitation: fast intake percs slowly droughty	Limitation: percs slowly	Limitation: percs slowly droughty
Nankin	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable

Table 16.--Engineering Index 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*	
AnA:												
Annemaine-------	0-9	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	95-100	70-95	40-75	0-20	NP-5
	9-37	Clay, clay loam, silty clay	CL	A-7, A-6	0	0	95-100	95-100	85-100	70-98	30-50	10-25
	37-49	Sandy clay loam, loam, clay loam	SC, CL	A-4, A-6	0	0	95-100	95-100	80-100	36-80	20-35	8-15
	49-74	Sandy clay loam, fine sandy loam, sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	95-100	95-100	60-90	30-50	0-20	NP-10
Wahee-----------	0-11	Fine sandy loam	SC-SM, SM	A-4, A-2	0	0	100	95-100	50-98	30-50	15-28	NP-7
	11-56	Clay, clay loam, silty clay	CH, CL	A-7, A-6	0	0	100	100	85-100	51-92	38-81	16-54
	56-80	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM, SM	A-2-4, A-4, A-2	0	0	95-100	95-100	60-90	30-50	0-20	NP-10
ArA:												
Ardilla---------	0-9	Fine sandy loam	SM, SC-SM	A-2-4, A-4	0	0	98-100	95-100	80-90	20-35	0-20	NP-7
	9-30	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-6, A-4, A-2-6, A-2-4	0	0	98-100	90-100	65-90	30-45	20-45	4-15
	30-60	Sandy clay loam, sandy clay	SC	A-5, A-6, A-7, A-4	0	0	95-100	90-100	70-90	36-50	25-45	7-20
BnB:												
Benevolence-----	0-12	Loamy sand	SM	A-4	0	0	90-100	85-100	70-85	36-45	0-30	NP-4
	12-47	Fine sandy loam, sandy loam	CL-ML, SC-SM, SM	A-4, A-2-4	0	0	90-100	85-100	60-85	36-55	15-22	3-7
	47-80	Sandy loam, sandy clay loam	CL, SC	A-4, A-6, A-2-4	0	0	90-100	85-100	80-95	36-70	25-35	8-15

Table 16.--Engineering Index 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*	
BnD:												
Benevolence-----	0-12	Loamy sand	SM	A-4	0	0	90-100	85-100	70-85	36-45	0-30	NP-4
	12-47	Fine sandy loam, sandy loam	CL-ML, SC-SM, SM	A-2-4, A-4	0	0	90-100	85-100	60-85	36-55	15-22	3-7
	47-80	Sandy loam, sandy clay loam	SC, CL	A-6, A-4, A-2-4	0	0	90-100	85-100	80-95	36-70	25-35	8-15
BOA:												
Bibb------------	0-37	Sandy loam	CL-ML, ML, SC-SM, SM	A-4, A-2, A-2-4	0	0-5	95-100	90-100	60-90	30-60	0-25	NP-7
	37-60	Sandy loam, loam, silt loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4, A-2	0	0-10	60-100	50-100	40-100	30-90	0-30	NP-7
Osier-----------	0-8	Loamy fine sand	SM	A-2, A-3, A-2-4	0	0	100	98-100	60-85	5-14	0-14	NP
	8-48	Sand, loamy sand, loamy fine sand	SM	A-3, A-2	0	0	100	95-100	65-96	5-20	0-14	NP
	48-75	Coarse sand, sand, fine sand	SP-SM, SP	A-1, A-2-4, A-3	0	0	100	90-100	40-60	2-10	0-14	NP
Kinston---------	0-12	Loam	ML, CL-ML, CL	A-4, A-6	0	0	100	98-100	85-100	50-97	17-45	4-15
	12-60	Loam, clay loam, sandy clay loam	CL	A-7, A-6, A-4	0	0	100	95-100	75-100	60-95	20-45	8-22
	60-72	Sand, loamy sand, loamy fine sand	SM	A-2, A-3	0	0	100	95-100	65-96	5-20	0-14	NP
BuB:												
Buncombe--------	0-10	Loamy sand	SP-SM, SM	A-2-4, A-2, A-3	0	0	98-100	98-100	90-97	7-32	10-20	NP
	10-55	Loamy sand, loamy fine sand, sand	SM, SP-SM	A-2-4, A-3, A-2	0	0	98-100	98-100	98-100	7-32	10-20	NP
	55-72	Sandy loam, fine sandy loam, loam	SM, ML	A-2-4, A-2, A-4	0	0	95-100	90-100	70-100	25-60	0-30	NP-7
Bigbee----------	0-17	Loamy sand	SM	A-2-4	0	0	100	95-100	60-90	15-30	0-14	NP
	17-80	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	85-100	85-100	50-75	5-20	0-14	NP

Table 16.--Engineering Index 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	
CdA:												
Clarendon-------	0-15	Loamy sand	SM, SP-SM	A-2, A-2-4	0	0	98-100	85-100	65-90	10-30	15-20	NP-3
	15-40	Sandy clay loam	SC-SM, CL-ML, CL, SC	A-4, A-6	0	0	98-100	85-100	75-95	36-55	20-40	5-15
	40-80	Sandy clay loam, sandy loam, sandy clay	CL, CL-ML, SC-SM, SC	A-2, A-4, A-6	0	0	99-100	96-100	80-95	25-55	15-40	NP-15
CoB:												
Cowarts---------	0-8	Fine sandy loam	SM, SC-SM	A-2, A-4	0	0	95-100	90-100	75-90	20-40	0-20	NP-5
	8-19	Fine sandy loam, sandy loam, sandy clay loam	SC-SM, SM, SC	A-2, A-4, A-6	0	0	95-100	90-100	60-95	23-45	20-40	NP-15
	19-25	Sandy clay loam, sandy clay, clay loam	SC, SM	A-7, A-6, A-2-6	0	0	95-100	90-100	60-95	25-50	40-54	5-25
	25-60	Sandy loam, sandy clay loam, clay loam	CL, CL-ML, SC-SM, SC	A-7, A-6, A-4, A-2	0	0	85-100	80-100	60-95	25-58	25-53	5-20
DBA:												
Dorovan---------	0-3	Muck	PT	A-8	0	0	---	---	---	---	0-0	NP
	3-74	Muck	PT		0	0	---	---	---	---	0-0	NP
	74-108	Sand, loamy sand, loam	SC-SM, SM, SP-SM	A-1, A-2-4, A-3, A-4	0	0	100	100	5-70	5-49	0-20	NP-7
Grady-----------	0-5	Sandy loam	SM, SC-SM, SC	A-4, A-2, A-2-4	0	0	100	99-100	85-100	25-50	15-20	NP-10
	5-11	Clay loam, sandy clay loam, loam	SC, CL	A-6	0	0	100	100	90-100	40-80	25-40	11-20
	11-62	Clay, sandy clay	CH, MH, CL	A-7, A-6	0	0	100	100	90-100	55-90	30-51	12-24
Byars-----------	0-13	Sandy loam	SC, SM, SC-SM	A-2, A-2-4, A-4	0	0	100	99-100	85-100	25-50	15-20	NP-10
	13-80	Clay, clay loam, sandy clay	CL, CH	A-7, A-7-5, A-7-6	0	0	98-100	98-100	90-100	60-95	39-75	17-42

Table 16.--Engineering Index 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	
DoA:												
Dothan----------	0-6	Loamy sand	SM	A-2-4, A-2	0	0	95-100	92-100	60-80	13-30	0-14	NP
	6-33	Sandy clay loam, sandy loam, fine sandy loam	SM, SC-SM, SC	A-6, A-4, A-2	0	0	95-100	92-100	60-90	23-49	0-40	NP-16
	33-60	Sandy clay loam, sandy clay	CL-ML, CL, SC, SC-SM	A-7, A-4, A-2, A-6	0	0	95-100	92-100	70-95	30-53	25-45	4-23
DoB:												
Dothan----------	0-6	Loamy sand	SM	A-2, A-2-4	0	0	95-100	92-100	60-80	13-30	0-14	NP
	6-33	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4, A-6	0	0	95-100	92-100	60-90	23-49	0-40	NP-16
	33-60	Sandy clay loam, sandy clay	CL-ML, SC, SC-SM, CL	A-2, A-6, A-7, A-4	0	0	95-100	92-100	70-95	30-53	25-45	4-23
DoC:												
Dothan----------	0-6	Loamy sand	SM	A-2, A-2-4	0	0	95-100	92-100	60-80	13-30	0-14	NP
	6-33	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-6, A-2, A-4	0	0	95-100	92-100	60-90	23-49	0-40	NP-16
	33-60	Sandy clay loam, sandy clay	CL-ML, CL, SC, SC-SM	A-7, A-6, A-4, A-2	0	0	95-100	92-100	70-95	30-53	25-45	4-23
DsA:												
Dunbar----------	0-8	Sandy loam	SM, SC-SM, SC	A-2-4, A-4, A-2	0	0	100	100	50-95	20-50	20-35	3-15
	8-14	Loam, sandy clay loam, clay loam	CL-ML, CL, SC	A-6, A-4	0	0	95-100	90-100	65-98	45-85	24-40	8-22
	14-92	Sandy clay, clay loam, clay	CH, CL, MH, ML	A-6, A-7	0	0	100	100	85-95	50-70	40-65	20-25

Table 16.--Engineering Index 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*	
DsA:												
Goldsboro-------	0-12	Loamy sand	SM, SC-SM	A-2-4	0	0	95-100	95-100	50-95	13-30	10-20	NP
	12-45	Sandy clay loam, sandy loam	CL-ML, SC, SC-SM, CL	A-6, A-4, A-2	0	0	98-100	95-100	60-100	25-55	20-37	4-18
	45-76	Sandy clay loam, clay loam, sandy clay	CH, SC, CL-ML, CL	A-7-6, A-6, A-4	0	0	95-100	90-100	65-95	36-70	25-55	6-32
FaA:												
Faceville-------	0-5	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	72-97	17-38	0-25	NP-7
	5-11	Sandy clay loam, sandy clay	ML, SM, SC, CL	A-6, A-4	0	0	98-100	90-100	85-98	46-66	0-35	NP-13
	11-72	Sandy clay, clay, clay loam	CH, CL, ML, SC	A-7, A-6	0	0	98-100	95-100	75-99	45-72	25-52	11-25
FaB:												
Faceville-------	0-5	Fine sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	72-97	17-38	0-25	NP-7
	5-11	Sandy clay loam, sandy clay	CL, ML, SC, SM	A-4, A-6	0	0	98-100	90-100	85-98	46-66	0-35	NP-13
	11-72	Sandy clay, clay, clay loam	ML, SC, CL, CH	A-6, A-7	0	0	98-100	95-100	75-99	45-72	25-52	11-25
FqB:												
Fuquay----------	0-10	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	10-34	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	34-44	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SM, SC	A-4, A-2-4, A-6	0	0	85-100	85-100	70-90	23-45	20-45	4-13
	44-80	Sandy clay loam, sandy loam	SC-SM, SM, SC	A-2, A-4, A-6, A-7-6	0	0	95-100	90-100	58-90	28-49	20-45	4-13

Table 16.--Engineering Index 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*	
GbA:												
Grady-----------	0-5	Sandy loam	SC, SC-SM, SM	A-4, A-2-4, A-2	0	0	100	99-100	85-100	25-50	15-20	NP-10
	5-11	Clay loam, sandy clay loam, loam	CL	A-6	0	0	100	100	90-100	51-80	25-40	11-20
	11-62	Clay, sandy clay	CL, CH, MH	A-7, A-6	0	0	100	100	90-100	55-90	30-51	12-24
Byars-----------	0-13	Sandy loam	SM, SC-SM, SC	A-2-4, A-4, A-2	0	0	100	99-100	85-100	25-50	15-20	NP-10
	13-80	Clay, clay loam, sandy clay	CL, CH	A-6, A-7-5, A-7, A-7-6	0	0	98-100	98-100	90-100	60-95	39-75	17-42
KeA:												
Kenansville-----	0-8	Loamy sand	SP-SM, SM	A-2, A-1	0	0	100	95-100	45-99	10-25	0-14	NP
	8-24	Loamy sand	SP-SM, SM	A-1, A-2	0	0	100	95-100	45-99	10-25	0-14	NP
	24-36	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SM, SC	A-2, A-4	0	0	100	95-100	50-99	25-45	0-30	NP-10
	36-84	Sand, loamy sand, loamy fine sand	SM, SP-SM	A-3, A-2, A-1	0	0	100	95-100	40-99	5-30	0-14	NP
KhB:												
Kolomoki--------	0-8	Fine sandy loam	CL-ML, ML, SM	A-2, A-4	0	0	95-100	95-100	80-98	30-55	0-25	NP-6
	8-28	Sandy clay, clay	CL	A-6, A-7	0	0	95-100	95-100	95-100	60-90	36-50	14-22
	28-35	Sandy clay, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	95-100	95-98	40-60	30-40	7-15
	35-42	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	95-100	95-100	90-99	30-49	0-30	NP-10
	42-65	Sand, loamy sand, loamy fine sand	SM, SP-SM	A-3, A-1, A-2	0	0	100	95-100	40-99	5-30	0-14	NP

Table 16.--Engineering Index 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*	
KhB:												
Cahaba----------	0-9	Sandy loam	SM	A-2-4, A-4	0	0	95-100	95-100	65-90	30-45	0-14	NP
	9-53	Sandy clay loam, loam, clay loam	CL, SC	A-4, A-6	0	0	90-100	80-100	75-90	40-75	22-35	8-15
	53-90	Sand, loamy sand, sandy loam	SM, SP-SM	A-2-4	0	0	95-100	90-100	60-85	10-35	0-14	NP
LcB:												
Lucy------------	0-8	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	8-24	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	24-35	Sandy loam, fine sandy loam, sandy clay loam	SC, SM, SC-SM	A-6, A-4, A-2	0	0	97-100	95-100	55-95	15-50	10-30	NP-15
	35-70	Sandy clay loam, clay loam, sandy clay	SM, SC, SC-SM	A-6, A-4, A-2	0	0	100	95-100	60-95	20-50	20-40	3-20
LcC:												
Lucy------------	0-8	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	8-24	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	24-35	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-4, A-6, A-2	0	0	97-100	95-100	55-95	15-50	10-30	NP-15
	35-70	Sandy clay loam, clay loam, sandy clay	SM, SC-SM, SC	A-4, A-2, A-6	0	0	100	95-100	60-95	20-50	20-40	3-20
LtE:												
Lucy------------	0-8	Loamy sand	SM, SP-SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	8-24	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-20	NP
	24-35	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6	0	0	97-100	95-100	55-95	15-50	10-30	NP-15
	35-70	Sandy clay loam, clay loam, sandy clay	SM, SC-SM, SC	A-6, A-4, A-2	0	0	100	95-100	60-95	20-50	20-40	3-20

Table 16.--Engineering Index 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*	
LtE:												
Troup-----------	0-2	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	2-23	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-20	NP
	23-54	Fine sand	SM, SP-SM	A-4, A-2	0	0	98-100	95-100	50-90	10-30	0-14	NP
	53-80	Sandy clay loam, sandy loam, fine sandy loam	SC, CL-ML, CL, SC-SM	A-2, A-4, A-6	0	0	95-100	90-100	60-90	24-55	19-40	4-20
MIA:												
Mantachie-------	0-11	Loam	ML, SC-SM, SM, CL-ML	A-4	0	0-5	95-100	90-100	60-85	40-60	15-20	NP-5
	11-61	Loam, clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-5	95-100	90-100	80-95	45-80	20-40	5-15
Iuka------------	0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	70-100	30-60	0-20	NP-7
	6-22	Fine sandy loam, loam, stratified sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0	95-100	85-100	65-100	36-75	0-30	NP-7
	22-60	Sandy loam, stratified fine sandy loam, loam	SM, ML	A-2, A-4	0	0	95-100	90-100	70-100	25-60	0-30	NP-7
Kinston---------	0-12	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	98-100	85-100	50-97	17-40	4-15
	12-60	Loam, clay loam, sandy clay loam	CL	A-4, A-6, A-7	0	0	100	95-100	75-100	60-95	20-45	8-22
	60-72	Sand, loamy sand, loamy fine sand	SP-SM, SM	A-3, A-2	0	0	100	95-100	65-96	5-20	0-14	NP
MtA:												
Meggett---------	0-8	Fine sandy loam	SM	A-2, A-4	0	0	100	95-100	50-85	15-55	0-14	NP
	8-16	Clay, sandy clay, clay loam	CH, CL, MH	A-6, A-7	0	0	100	90-100	75-100	51-90	30-60	11-30
	16-52	Clay, sandy clay, clay loam	CH, MH, CL	A-6, A-7	0	0	100	90-100	75-100	51-90	35-65	11-30
	52-65	Sandy clay, sandy clay loam, clay	SM, ML, SC, CL, MH	A-7, A-4, A-6	0	0	90-100	65-100	50-100	36-90	30-60	10-25

Table 16.--Engineering Index 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*	
NaB:												
Nankin----------	0-8	Sandy loam	SM, SP-SM	A-4, A-2	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-6, A-4, A-2	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	SC, ML, CL-ML, CL	A-4, A-6, A-7	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	CL, SC, CL-ML, SC-SM	A-6, A-2, A-4	0	0	98-100	95-100	70-85	25-55	20-40	4-16
NcD:												
Nankin----------	0-8	Sandy loam	SM, SP-SM	A-2, A-4	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC, SM, SC-SM	A-2, A-4, A-6	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	SC, CL-ML, CL, ML	A-4, A-6, A-7	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	CL-ML, SC, SC-SM, CL	A-6, A-4, A-2	0	0	98-100	95-100	70-85	25-55	20-40	4-16
Cowarts---------	0-8	Fine sandy loam	SC-SM, SM	A-4, A-2	0	0	95-100	90-100	75-90	20-40	0-20	NP-5
	8-19	Fine sandy loam, sandy loam, sandy clay loam	SM, SC-SM, SC	A-6, A-4, A-2	0	0	95-100	90-100	60-95	23-45	20-40	NP-15
	19-25	Sandy clay loam, sandy clay, clay loam	SM, SC	A-7, A-6, A-2-6	0	0	95-100	90-100	60-95	25-50	20-54	5-25
	25-60	Sandy loam, sandy clay loam, clay loam	CL, SC-SM, CL-ML, SC	A-2, A-6, A-7, A-4	0	0	85-100	80-100	60-95	25-58	25-53	5-20
NpE:												
Nankin----------	0-8	Sandy loam	SP-SM, SM	A-4, A-2	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-6, A-4, A-2	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	CL, ML, SC, CL-ML	A-7, A-6, A-4	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	CL, SC, CL-ML, SC-SM	A-4, A-6, A-2	0	0	98-100	95-100	70-85	25-55	20-40	4-16

Table 16.--Engineering Index 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	
NpE:												
Lucy------------	0-8	Loamy sand	SM, SP-SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-20	NP
	8-24	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-20	NP
	24-35	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SC, SM	A-2, A-4, A-6	0	0	97-100	95-100	55-95	15-50	10-30	NP-15
	35-70	Sandy clay loam, clay loam, sandy clay	SM, SC, SC-SM	A-4, A-2, A-6	0	0	100	95-100	60-95	20-50	20-40	3-20
Springhill------	0-5	Sandy loam	SM	A-2	0	0-5	98-100	95-100	75-85	20-35	0-14	NP
	5-11	Sandy loam, fine sandy loam	SM	A-2	0	0	98-100	95-100	70-96	25-35	0-30	NP-4
	11-45	Sandy loam, sandy clay loam	SC-SM, SC, CL	A-4, A-6	0	0	98-100	95-100	70-96	40-65	22-46	8-21
	45-72	Loamy sand, sandy loam	SM, SC-SM	A-2, A-4	0	0	98-100	95-100	70-96	15-45	0-30	3-16
NsE:												
Nankin----------	0-8	Sandy loam	SP-SM, SM	A-4, A-2	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC-SM, SM, SC	A-2, A-4, A-6	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	SC, ML, CL, CL-ML	A-7, A-6, A-4	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6, A-2	0	0	98-100	95-100	70-85	25-55	20-40	4-16
Springhill------	0-5	Sandy loam	SM	A-2	0	0-5	98-100	95-100	75-85	20-35	0-14	NP
	5-11	Sandy loam, fine sandy loam	SM	A-2	0	0	98-100	95-100	70-96	25-35	0-30	NP-4
	11-45	Sandy loam, sandy clay loam	SC-SM, SC, CL	A-6, A-4	0	0	98-100	95-100	70-96	40-65	22-46	8-21
	45-72	Loamy sand, sandy loam	SC-SM, SM	A-4, A-2	0	0	98-100	95-100	70-96	15-45	0-30	3-16

Table 16.--Engineering Index 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*	
NsE:												
Henderson-------	0-13	Gravelly sandy loam	SC-SM, SM	A-1, A-2	0	25-40	70-90	65-90	45-75	15-30	15-25	NP-7
	13-49	Gravelly sandy clay	CH, CL	A-6, A-7	0	25-45	75-90	65-85	60-80	50-70	30-53	18-30
	49-65	Gravelly sandy clay, cherty clay	CL, CH	A-7	0	25-45	75-85	65-85	60-80	55-75	45-56	25-32
OiA:												
Ocilla----------	0-4	Loamy sand	SM	A-2-4	0	0	98-100	98-100	65-95	13-20	0-14	NP
	4-28	Loamy sand	SM	A-2-4	0	0	98-100	98-100	65-95	13-20	0-14	NP
	28-59	Sandy loam, sandy clay loam, fine sandy loam	SC, ML, SM, CL	A-2, A-4, A-6	0	0	100	95-100	80-100	20-55	20-40	NP-18
	59-67	Sandy clay loam, sandy clay, sandy loam	CL, SC	A-7, A-4, A-6	0	0	100	95-100	80-100	36-60	20-45	7-20
Albany----------	0-7	Sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	5-20	0-0	NP
	7-48	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	75-90	5-20	0-0	NP
	48-56	Sandy loam	SM	A-4, A-2	0	0	100	100	75-92	22-30	0-14	NP
	56-88	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4, A-6	0	0	97-100	95-100	70-100	20-50	15-40	NP-17
OrA:												
Orangeburg------	0-7	Sandy loam	SM	A-2	0	0	98-100	95-100	75-95	20-35	0-14	NP
	7-12	Sandy loam	SM	A-2	0	0	98-100	95-100	70-96	25-35	0-30	NP-4
	12-54	Sandy clay loam, sandy loam	SC, SC-SM, SM, CL	A-4, A-6	0	0	98-100	95-100	71-96	38-58	22-40	3-19
	54-72	Sandy clay loam, sandy clay, sandy loam	CL, SC	A-4, A-7, A-6	0	0	98-100	95-100	70-97	40-65	24-46	8-21

Table 16.--Engineering Index 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*	
OrB:												
Orangeburg------	0-7	Sandy loam	SM	A-2	0	0	98-100	95-100	75-95	20-35	0-14	NP
	7-12	Sandy loam	SM	A-2	0	0	98-100	95-100	70-96	25-35	0-30	NP-4
	12-54	Sandy clay loam, sandy loam	SM, SC-SM, SC, CL	A-6, A-4	0	0	98-100	95-100	71-96	38-58	22-40	3-19
	54-72	Sandy clay loam, sandy clay, sandy loam	SC, CL	A-4, A-6, A-7	0	0	98-100	95-100	70-97	40-65	24-46	8-21
OrC:												
Orangeburg------	0-7	Sandy loam	SM	A-2	0	0	98-100	95-100	75-95	20-35	0-14	NP
	7-12	Sandy loam	SM	A-2	0	0	98-100	95-100	70-96	25-35	0-30	NP-4
	12-54	Sandy clay loam, sandy loam	CL, SC, SC-SM, SM	A-6, A-4	0	0	98-100	95-100	71-96	38-58	22-40	3-19
	54-72	Sandy clay loam, sandy clay, sandy loam	CL, SC	A-4, A-6, A-7	0	0	98-100	95-100	70-97	40-65	24-46	8-21
PaA:												
Pansey----------	0-10	Fine sandy loam	SM, ML	A-2, A-4	0	0	100	95-100	55-85	30-55	0-30	NP-4
	10-20	Sandy loam, sandy clay loam	SM	A-2, A-4	0	0	100	95-100	80-100	25-40	0-30	NP-6
	20-35	Sandy clay loam	SM, SC, SC-SM	A-6, A-2, A-4	0	0	100	95-100	70-95	30-50	0-34	NP-14
	35-70	Sandy clay loam, sandy clay	SC-SM, SM, SC	A-4, A-6, A-2	0	0	100	95-100	70-95	25-50	0-30	NP-14
PeA:												
Pansey----------	0-10	Fine sandy loam	ML, SM	A-4, A-2	0	0	100	95-100	55-85	30-55	0-30	NP-4
	10-20	Sandy loam, sandy clay loam	SM	A-4, A-2	0	0	100	95-100	80-100	25-40	0-30	NP-6
	20-35	Sandy clay loam	SC, SC-SM, SM	A-4, A-6, A-2	0	0	100	95-100	70-95	30-50	0-34	NP-14
	35-70	Sandy clay loam, sandy clay	SC, SC-SM, SM	A-2, A-4, A-6	0	0	100	95-100	70-95	25-50	0-30	NP-14

Table 16.--Engineering Index 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*	
PmA:												
Plummer---------	0-9	Sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	5-20	0-0	NP
	9-50	Sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	75-90	5-20	0-0	NP
	50-72	Sandy loam, sandy clay loam, fine sandy loam	SC-SM, SC, SM	A-4, A-2-4	0	0	100	97-100	76-96	20-48	0-30	NP-10
Pt:												
Pits, borrow----	0-60	Variable	---	---	---	---	---	---	---	---	---	---
RbA:												
Red Bay---------	0-6	Sandy loam	SC-SM, SM	A-4, A-2	0	0	100	95-100	60-85	15-45	0-20	NP-4
	6-20	Sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4	0	0	100	95-100	60-85	15-50	0-35	NP-10
	20-52	Sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	70-90	24-50	18-40	4-16
	52-72	Sandy clay loam, sandy clay	CL, SC	A-4, A-7, A-6	0	0	100	98-100	70-97	40-65	24-46	8-21
RbB:												
Red Bay---------	0-6	Sandy loam	SC-SM, SM	A-4, A-2	0	0	100	95-100	60-85	15-45	0-20	NP-4
	6-20	Sandy loam, sandy clay loam	SC, SC-SM, SM	A-4, A-2	0	0	100	95-100	60-85	15-50	0-35	NP-10
	20-52	Sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	70-90	24-50	18-40	4-16
	52-72	Sandy clay loam, sandy clay	CL, SC	A-4, A-6, A-7	0	0	100	98-100	70-97	40-65	24-46	8-21
RbC:												
Red Bay---------	0-6	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	60-85	15-45	0-20	NP-4
	6-20	Sandy loam, sandy clay loam	SC, SC-SM, SM	A-4, A-2	0	0	100	95-100	60-85	15-50	0-35	NP-10
	20-52	Sandy clay loam	SC, SC-SM	A-4, A-6, A-2	0	0	100	95-100	70-90	24-50	18-40	4-16
	52-72	Sandy clay loam, sandy clay	CL, SC	A-4, A-6, A-7	0	0	100	98-100	70-97	40-65	24-46	8-21

Table 16.--Engineering Index 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*	
RvB:												
Riverview-------	0-6	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	60-80	15-30	3-14
	6-39	Sandy clay loam, silty clay loam, loam	CL-ML, CL, ML	A-4, A-6	0	0	100	100	90-100	60-95	20-40	3-20
	39-70	Loamy fine sand, sandy loam, sand	SM, SC-SM	A-2-4, A-2, A-4	0	0	100	100	50-95	15-45	0-20	NP-7
TnB:												
Troup-----------	0-2	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	2-23	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-20	NP
	23-54	Fine sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-30	0-14	NP
	54-80	Sandy clay loam, sandy loam, fine sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6, A-2	0	0	95-100	90-100	60-90	24-55	19-40	4-20
Bonifay---------	0-4	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	4-50	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	50-74	Sandy loam, sandy clay loam, fine sandy loam	SC, SC-SM, SM	A-2-6, A-6, A-4, A-2-4	0	0	95-100	90-100	63-95	23-50	0-30	NP-12
TnC:												
Troup-----------	0-2	Loamy sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	2-23	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-20	NP
	23-54	Fine sand	SP-SM, SM	A-2, A-4	0	0	98-100	95-100	50-90	10-30	0-14	NP
	54-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, CL, CL-ML	A-6, A-4, A-2	0	0	95-100	90-100	60-90	24-55	19-40	4-20
Bonifay---------	0-4	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	4-50	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	50-74	Sandy loam, sandy clay loam, fine sandy loam	SC-SM, SC, SM	A-4, A-6, A-2-4, A-2-6	0	0	95-100	90-100	63-95	23-50	0-30	NP-12

Table 16.--Engineering Index 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*	
TyB:												
Troup-----------	0-2	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90	10-40	0-14	NP
	2-23	Loamy sand	SM, SP-SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-20	NP
	23-54	Fine sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-30	0-14	NP
	54-80	Sandy clay loam, sandy loam, fine sandy loam	SC-SM, SC, CL-ML, CL	A-6, A-4, A-2	0	0	95-100	90-100	60-90	24-55	19-40	4-20
Lucy------------	0-8	Loamy sand	SM, SP-SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	8-24	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90	10-40	0-14	NP
	24-35	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SM, SC	A-2, A-4, A-6	0	0	97-100	95-100	55-95	15-50	10-30	NP-15
	35-70	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, SM	A-2, A-4, A-6	0	0	100	95-100	60-95	20-50	20-40	3-20
UbA:												
Urban land------	0-6	Variable	---	---	---	---	---	---	---	---	---	---
Bibb------------	0-37	Sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0-5	95-100	90-100	60-90	30-60	0-25	NP-7
	37-60	Sandy loam, loam, silt loam	CL-ML, SM, SC-SM, ML	A-2, A-4	0	0-10	60-100	50-100	40-100	30-90	0-30	NP-7
Kinston---------	0-12	Loam	CL-ML, ML, CL	A-4, A-6	0	0	100	98-100	85-100	50-97	17-40	4-15
	12-60	Loam, clay loam, sandy clay loam	CL	A-4, A-6, A-7	0	0	100	95-100	75-100	60-95	20-45	8-22
	60-65	Sand, loamy sand, loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	65-96	5-20	0-14	NP
UcA:												
Urban land------	0-6	Variable	---	---	---	---	---	---	---	---	---	---

Table 16.--Engineering Index 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*	
UcA:												
Clarendon-------	0-15	Loamy sand	SM, SP-SM	A-2-4, A-2	0	0	98-100	85-100	65-90	10-30	15-20	NP-3
	15-40	Sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	98-100	85-100	75-95	36-55	20-40	5-15
	40-80	Sandy clay loam, sandy loam, sandy clay	SC, SC-SM, CL, CL-ML	A-2, A-4, A-6	0	0	99-100	96-100	80-95	25-55	15-40	NP-15
Ardilla---------	0-9	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	98-100	95-100	80-90	20-35	0-20	NP-7
	9-30	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	98-100	90-100	65-90	30-45	20-45	4-15
	30-60	Sandy clay loam, sandy clay	SC, SM	A-4, A-5, A-6, A-7	0	0	95-100	90-100	70-90	36-50	25-45	7-20
UdB:												
Urban land------	0-6	Variable	---	---	---	---	---	---	---	---	---	---
Dothan----------	0-6	Loamy sand	SM	A-2-4, A-2	0	0	95-100	92-100	60-80	13-30	0-14	NP
	6-33	Sandy clay loam, sandy loam, fine sandy loam	SM, SC-SM, SC	A-6, A-4, A-2	0	0	95-100	92-100	60-90	23-49	0-40	NP-16
	33-60	Sandy clay loam, sandy clay	CL-ML, SC, CL, SC-SM	A-4, A-6, A-7, A-2	0	0	95-100	92-100	70-95	30-53	25-45	4-23
UrB:												
Urban land------	0-6	Variable	---	---	---	---	---	---	---	---	---	---
Red Bay---------	0-6	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	95-100	60-85	15-45	0-20	NP-4
	6-20	Sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4	0	0	100	95-100	60-85	15-50	0-35	NP-10
	20-52	Sandy clay loam	SC-SM, SC	A-2, A-4, A-6	0	0	100	95-100	70-90	24-50	18-40	4-16
	52-72	Sandy clay loam, sandy clay	CL, SC	A-4, A-6, A-7	0	0	100	98-100	70-97	40-65	24-46	8-21

Table 16.--Engineering Index 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*	
VaB:												
Varina----------	0-14	Sandy loam	SC-SM, SM	A-2-4, A-4, A-2	0	0	95-100	92-100	75-95	20-49	0-25	NP-7
	14-38	Sandy clay, clay loam, clay	SC, SM, ML, MH	A-6, A-7	0	0	95-100	92-100	80-95	36-65	36-52	11-25
	38-81	Sandy clay, clay loam, clay	CH, CL, SC	A-6, A-4, A-7	0	0	95-100	92-100	75-95	36-68	28-53	8-26
	81-118	Sandy clay loam, sandy loam, sandy clay	CL, SC-SM, SC, CL-ML	A-6, A-2, A-4	0	0	99-100	96-100	80-95	25-55	15-40	NP-15
WnB:												
Wicksburg-------	0-9	Loamy sand	SM	A-2	0	0	100	90-100	50-80	15-35	0-14	NP-14
	9-26	Loamy sand	SM	A-2	0	0	100	90-100	50-80	15-35	0-14	NP-14
	26-30	Sandy clay loam, clay loam	CL-ML, SC, SC-SM, CL	A-4, A-6	0	0	100	98-100	80-100	36-80	0-35	NP-14
	30-65	Clay loam, sandy clay, clay	CL	A-6, A-7	0	0	100	98-100	85-100	50-95	35-45	12-20
Nankin----------	0-8	Sandy loam	SM, SP-SM	A-2, A-4	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-4, A-6, A-2	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	ML, SC, CL-ML, CL	A-6, A-7, A-4	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	CL-ML, SC-SM, SC, CL	A-4, A-6, A-2	0	0	98-100	95-100	70-85	25-55	20-40	4-16

Table 16.--Engineering Index 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*	
WnC:												
Wicksburg-------	0-9	Loamy sand	SM	A-2	0	0	100	90-100	50-80	15-35	0-14	NP-14
	9-26	Loamy sand	SM	A-2	0	0	100	90-100	50-80	15-35	0-14	NP-14
	26-30	Sandy clay loam, clay loam	SC-SM, SC, CL-ML, CL	A-6, A-4	0	0	100	98-100	80-100	36-80	0-35	NP-14
	30-65	Clay loam, sandy clay, clay	CL	A-6, A-7	0	0	100	98-100	85-100	50-95	35-45	12-20
Nankin----------	0-8	Sandy loam	SP-SM, SM	A-2, A-4	0	0	95-100	92-100	75-90	20-40	0-25	NP-5
	8-13	Sandy clay loam, sandy loam	SC-SM, SM, SC	A-4, A-6, A-2	0	0	97-100	95-100	75-90	25-45	20-35	4-15
	13-38	Sandy clay, clay, sandy clay loam	ML, SC, CL-ML, CL	A-6, A-7, A-4	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	38-65	Sandy clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	98-100	95-100	70-85	25-55	20-40	4-16

Table 17.--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	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
AnA:								
Annemaine----	---	---	---	---	0	0	High	High
Wahee--------	---	---	---	---	0	0	High	High
ArA:								
Ardilla------	Fragipan	20-35	20-40	Moderately cemented	0	0	High	High
BnB:								
Benevolence--	---	---	---	---	0	0	Low	High
BnD:								
Benevolence--	---	---	---	---	0	0	Low	High
BOA:								
Bibb---------	---	---	---	---	0	0	High	Moderate
Osier--------	---	---	---	---	0	0	High	High
Kinston------	---	---	---	---	0	0	High	High
BuB:								
Buncombe-----	---	---	---	---	0	0	Low	Moderate
Bigbee-------	---	---	---	---	0	0	Low	Moderate
CdA:								
Clarendon----	Plinthite	24-60	30-45	Noncemented	0	0	Moderate	High
CoB:								
Cowarts------	---	---	---	---	0	0	Moderate	Moderate
DBA:								
Dorovan------	---	---	---	---	6-12	51-80	High	High
Grady--------	---	---	---	---	0	0	High	High
Byars--------	---	---	---	---	0	0	High	High
DoA:								
Dothan-------	Plinthite	24-60	20-40	Noncemented	0	0	Moderate	Moderate
DoB:								
Dothan-------	Plinthite	24-60	20-40	Noncemented	0	0	Moderate	Moderate
DoC:								
Dothan-------	Plinthite	24-60	20-40	Noncemented	0	0	Moderate	Moderate
DsA:								
Dunbar-------	---	---	---	---	0	0	High	High
Goldsboro----	---	---	---	---	0	0	Moderate	High
FaA:								
Faceville----	---	---	---	---	0	0	Low	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
FaB:								
Faceville----	---	---	---	---	0	0	Low	Moderate
FqB:								
Fuquay-------	Plinthite	35-60	20-40	Noncemented	0	0	Low	High
GbA:								
Grady--------	---	---	---	---	0	0	High	High
Byars--------	---	---	---	---	0	0	High	High
KeA:								
Kenansville--	---	---	---	---	0	0	Low	High
KhB:								
Kolomoki-----	---	---	---	---	0	0	Moderate	Moderate
Cahaba-------	---	---	---	---	0	0	Moderate	Moderate
LcB:								
Lucy---------	---	---	---	---	0	0	Low	High
LcC:								
Lucy---------	---	---	---	---	0	0	Low	High
LtE:								
Lucy---------	---	---	---	---	0	0	Low	High
Troup--------	---	---	---	---	0	0	Low	Moderate
MIA:								
Mantachie----	---	---	---	---	0	0	High	High
Iuka---------	---	---	---	---	0	0	Moderate	High
Kinston------	---	---	---	---	0	0	High	High
MtA:								
Meggett------	---	---	---	---	0	0	High	Moderate
NaB:								
Nankin-------	---	---	---	---	0	0	High	High
NcD:								
Nankin-------	---	---	---	---	0	0	High	High
Cowarts------	---	---	---	---	0	0	Moderate	Moderate
NpE:								
Nankin-------	---	---	---	---	0	0	High	High
Lucy---------	---	---	---	---	0	0	Low	High
Springhill---	---	---	---	---	0	0	Moderate	Moderate
NsE:								
Nankin-------	---	---	---	---	0	0	High	High
Springhill---	---	---	---	---	0	0	Moderate	Moderate
Henderson----	---	---	---	---	0	0	High	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
OiA:								
Ocilla-------	---	---	---	---	0	0	High	Moderate
Albany-------	---	---	---	---	0	0	High	High
OrA:								
Orangeburg---	---	---	---	---	0	0	Moderate	Moderate
OrB:								
Orangeburg---	---	---	---	---	0	0	Moderate	Moderate
OrC:								
Orangeburg---	---	---	---	---	0	0	Moderate	Moderate
PaA:								
Pansey-------	Plinthite	30-60	20-38	Noncemented	0	0	High	Moderate
PeA:								
Pansey-------	Plinthite	30-60	20-38	Noncemented	0	0	High	Moderate
PmA:								
Plummer------	---	---	---	---	0	0	Moderate	High
Pt:								
Pits, borrow-	---	---	---	---	0	0	---	---
RbA:								
Red Bay------	---	---	---	---	0	0	Moderate	Moderate
RbB:								
Red Bay------	---	---	---	---	0	0	Moderate	Moderate
RbC:								
Red Bay------	---	---	---	---	0	0	Moderate	Moderate
RvB:								
Riverview----	---	---	---	---	0	0	Low	Moderate
TnB:								
Troup--------	---	---	---	---	0	0	Low	Moderate
Bonifay------	Plinthite	42-60	12-30	Noncemented	0	0	Low	High
TnC:								
Troup--------	---	---	---	---	0	0	Low	Moderate
Bonifay------	Plinthite	42-60	12-30	Noncemented	0	0	Low	High
TyB:								
Troup--------	---	---	---	---	0	0	Low	Moderate
Lucy---------	---	---	---	---	0	0	Low	High
UbA:								
Urban land---	---	---	---	---	0	0	---	---
Bibb---------	---	---	---	---	0	0	High	Moderate
Kinston------	---	---	---	---	0	0	High	High
UcA:								
Urban land---	---	---	---	---	0	0	---	---

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
UcA:								
Clarendon----	Plinthite	24-60	30-45	Noncemented	0	0	Moderate	High
Ardilla------	Fragipan	20-35	20-40	Moderately cemented	0	0	High	High
UdB:								
Urban land---	---	---	---	---	0	0	---	---
Dothan-------	Plinthite	24-60	20-40	Noncemented	0	0	Moderate	Moderate
UrB:								
Urban land---	---	---	---	---	0	0	---	---
Red Bay------	---	---	---	---	0	0	Moderate	Moderate
VaB:								
Varina-------	Plinthite	40-60	32-54	Noncemented	0	0	Moderate	High
WnB:								
Wicksburg----	---	---	---	---	0	0	High	High
Nankin-------	---	---	---	---	0	0	High	High
		In	In		In	In		
WnC:								
Wicksburg----	---	---	---	---	0	0	High	High
Nankin-------	---	---	---	---	0	0	High	High

Table 18.--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	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
AnA:									
Annemaine----	C	Jan-Mar	1.5-2.5	>6.0	---	---	None	Brief	Rare
Wahee--------	D	Dec-Mar	0.5-1.5	>6.0	---	---	None	Brief	Rare
ArA:									
Ardilla------	C	Dec-Apr	1.0-2.0	>6.0	---	---	None	---	None
BnB:									
Benevolence--	B	Jan-Dec	---	---	---	---	None	---	None
BnD:									
Benevolence--	B	Jan-Dec	---	---	---	---	None	---	None
BOA:									
Bibb---------	D	Nov-May	0.5-1.0	>6.0	---	---	None	Brief	Frequent
Osier--------	A/D	Nov-May	0.5-1.0	>6.0	---	---	None	Brief	Frequent
Kinston------	D	Nov-May	0.0-1.0	>6.0	---	---	None	Brief	Frequent
BuB:									
Buncombe-----	A	Nov-May	---	---	---	---	None	Brief	Frequent
Bigbee-------	A	Nov-May	3.5-6.0	>6.0	---	---	None	Brief	Frequent
CdA:									
Clarendon----	C	Dec-Apr	2.0-3.0	>6.0	---	---	None	---	None
CoB:									
Cowarts------	C	Jan-Dec	---	---	---	---	None	---	None
DBA:									
Dorovan------	D	Jan-Dec	0.0-0.5	>6.0	0.0-1.0	Very long	Frequent	---	None
Grady--------	D	Dec-May	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
Byars--------	D	Dec-May	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
DoA:									
Dothan-------	B	Jan-Apr	3.0-5.0	4.0-5.0	---	---	None	---	None
DoB:									
Dothan-------	B	Jan-Apr	3.0-5.0	4.0-5.0	---	---	None	---	None
DoC:									
Dothan-------	B	Jan-Apr	3.0-5.0	4.0-5.0	---	---	None	---	None
DsA:									
Dunbar-------	D	Nov-May	1.0-2.0	>6.0	---	---	None	---	None
Goldsboro----	B	Dec-Apr	1.5-2.5	>6.0	---	---	None	---	None
FaA:									
Faceville----	B	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
FaB:									
Faceville----	B	Jan-Dec	---	---	---	---	None	---	None
FqB:									
Fuquay-------	B	Jan-Apr	4.0-6.0	5.0-6.0	---	---	None	---	None
GbA:									
Grady--------	D	Dec-May	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
Byars--------	D	Dec-May	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
KeA:									
Kenansville--	A	Jan-Dec	---	---	---	---	None	Very brief	Rare
KhB:									
Kolomoki-----	B	Jan-Dec	---	---	---	---	None	Very brief	Rare
Cahaba-------	B	Jan-Dec	---	---	---	---	None	Very brief	Rare
LcB:									
Lucy---------	A	Jan-Dec	---	---	---	---	None	---	None
LcC:									
Lucy---------	A	Jan-Dec	---	---	---	---	None	---	None
LtE:									
Lucy---------	A	Jan-Dec	---	---	---	---	None	---	None
Troup--------	A	Jan-Dec	---	---	---	---	None	---	None
MIA:									
Mantachie----	C	Nov-May	1.0-1.5	>6.0	---	---	None	Brief	Frequent
Iuka---------	C	Nov-May	1.0-3.0	>6.0	---	---	None	Brief	Frequent
Kinston------	B/D	Nov-May	0.0-1.0	>6.0	---	---	None	Brief	Frequent
MtA:									
Meggett------	D	Nov-Apr	0.0-1.0	>6.0	---	---	None	Brief	Frequent
NaB:									
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None
NcD:									
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None
Cowarts------	C	Jan-Dec	---	---	---	---	None	---	None
NpE:									
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None
Lucy---------	A	Jan-Dec	---	---	---	---	None	---	None
Springhill---	B	Jan-Dec	---	---	---	---	None	---	None
NsE:									
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None
Springhill---	B	Jan-Dec	---	---	---	---	None	---	None
Henderson----	C	Jan-Dec	---	---	---	---	None	---	None

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
OiA:									
Ocilla-------	C	Dec-Apr	1.0-2.5	>6.0	---	---	None	---	None
Albany-------	C	Dec-Apr	1.0-2.5	>6.0	---	---	None	---	None
OrA:									
Orangeburg---	B	Jan-Dec	---	---	---	---	None	---	None
OrB:									
Orangeburg---	B	Jan-Dec	---	---	---	---	None	---	None
OrC:									
Orangeburg---	B	Jan-Dec	---	---	---	---	None	---	None
PaA:									
Pansey-------	D	Dec-Apr	0.0-1.5	>6.0	0.0-1.0	Long	Occasional	---	None
PeA:									
Pansey-------	D	Dec-Apr	0.0-1.5	>6.0	---	---	None	Brief	Occasional
PmA:									
Plummer------	B/D	Dec-May	0.0-1.0	>6.0	---	---	None	---	None
Pt:									
Pits, borrow-	---	Jan-Dec	---	---	---	---	None	---	None
RbA:									
Red Bay------	B	Jan-Dec	---	---	---	---	None	---	None
RbB:									
Red Bay------	B	Jan-Dec	---	---	---	---	None	---	None
RbC:									
Red Bay------	B	Jan-Dec	---	---	---	---	None	---	None
RvB:									
Riverview----	B	Dec-Mar	3.0-5.0	>6.0	---	---	None	Brief	Occasional
TnB:									
Troup--------	A	Jan-Dec	---	---	---	---	None	---	None
Bonifay------	A	Jan-Apr	4.0-5.0	4.5-5.0	---	---	None	---	None
TnC:									
Troup--------	A	Jan-Dec	---	---	---	---	None	---	None
Bonifay------	A	Jan-Apr	4.0-5.0	4.5-5.0	---	---	None	---	None
TyB:									
Troup--------	A	Jan-Dec	---	---	---	---	None	---	None
Lucy---------	A	Jan-Dec	---	---	---	---	None	---	None
UbA:									
Urban land---	---	Jan-Dec	---	---	---	---	None	---	None
Bibb---------	D	Nov-May	0.5-1.0	>6.0	---	---	None	Brief	Frequent
Kinston------	B/D	Nov-May	0.0-1.0	>6.0	---	---	None	Brief	Frequent

Table 18.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
UcA:									
Urban land---	---	Jan-Dec	---	---	---	---	None	---	None
Clarendon----	C	Dec-Apr	2.0-3.0	>6.0	---	---	None	---	None
Ardilla------	C	Dec-Apr	1.0-2.0	>6.0	---	---	None	---	None
UdB:									
Urban land---	---	Jan-Dec	---	---	---	---	None	---	None
Dothan-------	B	Jan-Apr	3.0-5.0	4.0-5.0	---	---	None	---	None
UrB:									
Urban land---	---	Jan-Dec	---	---	---	---	None	---	None
Red Bay------	B	Jan-Dec	---	---	---	---	None	---	None
VaB:									
Varina-------	C	Dec-Apr	4.0-5.0	4.5-5.0	---	---	None	---	None
WnB:									
Wicksburg----	B	Jan-Dec	---	---	---	---	None	---	None
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None
WnC:									
Wicksburg----	B	Jan-Dec	---	---	---	---	None	---	None
Nankin-------	C	Jan-Dec	---	---	---	---	None	---	None

Table 19.--Physical and Chemical Properties of the Soils

[Entries under "Erosion factors--T" apply to the entire profile. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors			Soil reaction
								Kw	Kf	T	
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
AnA:											
Annemaine-----	0-9	10-20	1.30-1.55	0.6-2	0.12-0.16	0.0-2.9	0.5-2.0	.28	.28	5	4.5-6.5
	9-37	35-50	1.30-1.45	0.06-0.2	0.14-0.16	3.0-5.9	0.0-0.5	.37	.37		4.5-5.5
	37-49	20-35	1.30-1.60	0.2-0.6	0.13-0.18	0.0-2.9	0.0-0.5	.37	.37		4.5-5.5
	49-74	5-25	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.0	.32	.32		4.5-5.5
Wahee---------	0-11	5-20	1.30-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	4.5-6.0
	11-56	35-70	1.40-1.60	0.06-0.2	0.12-0.20	3.0-5.9	0.0-0.5	.28	.28		3.5-5.5
	56-80	5-25	1.40-1.60	0.2-2	0.14-0.18	0.0-2.9	0.0-0.5	.32	.32		3.5-5.5
ArA:											
Ardilla-------	0-9	4-17	1.30-1.70	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	4.5-6.0
	9-30	16-35	1.40-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	30-60	20-40	1.50-1.70	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
BnB:											
Benevolence---	0-12	1-10	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	12-47	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	47-80	10-30	1.40-1.70	0.6-2	0.14-0.19	0.0-2.9	0.0-0.2	.20	.20		4.5-6.0
BnD:											
Benevolence---	0-12	1-10	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	12-47	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	47-80	10-30	1.40-1.70	0.6-2	0.14-0.19	0.0-2.9	0.0-0.2	.20	.20		4.5-6.0
BOA:											
Bibb----------	0-37	2-18	1.50-1.70	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3.5-5.5
	37-60	2-18	1.45-1.75	0.6-2	0.10-0.20	0.0-2.9	0.5-1.0	.37	.37		3.5-5.5
Osier---------	0-8	1-10	1.35-1.60	6-20	0.03-0.10	0.0-2.9	2.0-5.0	.10	.10	5	3.5-6.0
	8-48	1-10	1.40-1.60	6-20	0.03-0.10	0.0-2.9	0.5-2.0	.10	.10		3.5-6.0
	48-75	2-5	1.40-1.60	6-20	0.02-0.05	0.0-2.9	0.2-1.0	.05	.05		3.5-6.0
Kinston-------	0-12	5-27	1.30-1.50	0.6-2	0.14-0.20	0.0-2.9	2.0-5.0	.37	.37	5	4.5-5.5
	12-60	18-35	1.30-1.50	0.6-2	0.14-0.18	0.0-2.9	0.0-3.0	.32	.32		4.5-5.5
	60-72	1-10	1.40-1.60	6-20	0.03-0.10	0.0-2.9	0.0-0.5	.10	.10		4.5-5.5
BuB:											
Buncombe------	0-10	3-12	1.60-1.75	6-20	0.06-0.10	0.0-2.9	0.5-1.0	.10	.10	5	4.5-6.5
	10-55	3-12	1.60-1.75	6-20	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10		4.5-6.5
	55-72	5-15	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.20	.20		4.5-5.5
Bigbee--------	0-17	4-10	1.40-1.50	6-20	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5	4.5-6.0
	17-80	1-10	1.40-1.50	6-20	0.05-0.08	0.0-2.9	0.0-0.5	.17	.17		4.5-6.0
CdA:											
Clarendon-----	0-15	2-10	1.40-1.60	2-6	0.08-0.12	0.0-2.9	0.5-3.0	.15	.15	5	4.5-6.5
	15-40	18-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.0-1.0	.20	.20		3.5-5.5
	40-80	15-40	1.40-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.15	.15		3.5-5.5
CoB:											
Cowarts-------	0-8	5-20	1.30-1.65	2-6	0.08-0.13	0.0-2.9	0.5-2.0	.24	.24	4	4.5-5.5
	8-19	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28		4.5-5.5
	19-25	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	25-60	18-35	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors			Soil reaction
								Kw	Kf	T	
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
DBA:											
Dorovan-------	0-3	0-0	0.25-0.40	0.6-2	0.20-0.25	0.0-0.0	20-80	.02	.02	3	3.5-5.0
	3-74	0-0	0.35-0.55	0.6-2	0.20-0.25	0.0-0.0	20-80	.02	.02		3.5-5.0
	74-10	5-20	1.40-1.65	6-20	0.05-0.08	0.0-2.9	0.0-4.0	.05	.05		4.5-5.5
Grady---------	0-5	15-20	1.25-1.45	0.6-2	0.10-0.15	0.0-2.9	1.0-4.0	.24	.24	5	3.5-5.5
	5-11	20-35	1.40-1.55	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20		3.5-5.5
	11-62	45-65	1.50-1.60	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.5	.10	.10		3.5-5.5
Byars---------	0-13	15-20	1.25-1.45	0.6-2	0.10-0.15	0.0-2.9	1.0-4.0	.24	.24	5	3.5-5.5
	13-80	35-60	1.30-1.60	0.06-0.2	0.14-0.18	3.0-5.9	0.0-0.5	.32	.32		3.5-5.5
DoA:											
Dothan--------	0-6	5-15	1.30-1.60	2-6	0.04-0.09	0.0-2.9	0.5-1.0	.15	.15	5	4.5-6.0
	6-33	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	33-60	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.0	.28	.28		4.5-6.0
DoB:											
Dothan--------	0-6	5-15	1.30-1.60	2-6	0.04-0.09	0.0-2.9	0.5-1.0	.15	.15	5	4.5-6.0
	6-33	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	33-60	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.0	.28	.28		4.5-6.0
DoC:											
Dothan--------	0-6	5-15	1.30-1.60	2-6	0.04-0.09	0.0-2.9	0.5-1.0	.15	.15	5	4.5-6.0
	6-33	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	33-60	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.0	.28	.28		4.5-6.0
DsA:											
Dunbar--------	0-8	5-27	1.45-1.65	2-6	0.10-0.15	0.0-2.9	2.0-4.0	.32	.32	5	4.5-5.5
	8-14	18-35	1.35-1.50	0.2-0.6	0.14-0.19	0.0-2.9	0.0-1.0	.28	.28		4.5-5.5
	14-92	30-55	1.25-1.45	0.2-0.6	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28		4.5-5.5
Goldsboro-----	0-12	2-8	1.55-1.75	6-20	0.06-0.11	0.0-2.9	0.5-2.0	.17	.17	5	3.5-5.5
	12-45	18-30	1.30-1.50	0.6-2	0.11-0.17	0.0-2.9	0.0-0.5	.24	.24		3.5-5.5
	45-76	20-35	1.30-1.40	0.6-2	0.11-0.20	0.0-2.9	0.0-0.5	.24	.24		3.5-5.5
FaA:											
Faceville-----	0-5	5-20	1.40-1.65	6-20	0.06-0.09	0.0-2.9	0.5-2.0	.28	.28	5	4.5-5.5
	5-11	20-36	1.35-1.60	0.6-2	0.12-0.15	0.0-2.9	0.0-0.5	.37	.37		4.5-5.5
	11-72	35-55	1.25-1.60	0.6-2	0.12-0.18	0.0-2.9	0.0-0.0	.37	.37		4.5-5.5
FaB:											
Faceville-----	0-5	5-20	1.40-1.65	6-20	0.06-0.09	0.0-2.9	0.5-2.0	.28	.28	5	4.5-5.5
	5-11	20-36	1.35-1.60	0.6-2	0.12-0.15	0.0-2.9	0.0-0.5	.37	.37		4.5-5.5
	11-72	35-55	1.25-1.60	0.6-2	0.12-0.18	0.0-2.9	0.0-0.0	.37	.37		4.5-5.5
FqB:											
Fuquay--------	0-10	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	10-34	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	34-44	10-34	1.40-1.60	0.6-2	0.08-0.13	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	44-80	18-35	1.40-1.60	0.6-2	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
GbA:											
Grady---------	0-5	15-20	1.25-1.45	0.6-2	0.10-0.15	0.0-2.9	1.0-4.0	.24	.24	5	3.5-5.5
	5-11	20-34	1.40-1.55	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20		3.5-5.5
	11-62	45-65	1.50-1.60	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.5	.10	.10		3.5-5.5
Byars---------	0-13	15-20	1.25-1.45	0.6-2	0.10-0.15	0.0-2.9	1.0-4.0	.24	.24	5	3.5-5.5
	13-80	35-60	1.30-1.60	0.06-0.2	0.14-0.18	3.0-5.9	0.0-0.5	.32	.32		3.5-5.5

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
KeA:											
Kenansville---	0-8	3-10	1.50-1.70	6-20	0.04-0.10	0.0-2.9	0.5-1.5	.15	.15	4	4.5-6.0
	8-24	3-10	1.50-1.70	6-20	0.04-0.10	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	24-36	5-20	1.30-1.50	2-6	0.10-0.16	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	36-84	1-10	1.50-1.70	6-20	0.00-0.05	0.0-2.9	0.0-0.0	.10	.10		4.5-6.0
KhB:											
Kolomoki------	0-8	10-14	1.35-1.45	2-6	0.06-0.09	0.0-2.9	0.5-1.5	.24	.24	4	4.5-6.0
	8-28	40-55	1.60-1.70	0.6-2	0.13-0.16	0.0-2.9	0.2-1.0	.32	.32		4.5-6.0
	28-35	20-35	1.50-1.60	0.6-2	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	35-42	10-34	1.50-1.60	0.6-2	0.06-0.11	0.0-2.9	0.0-0.0	.24	.24		4.5-6.0
	42-65	1-10	1.50-1.70	6-20	0.00-0.05	0.0-2.9	0.0-0.0	.10	.10		4.5-6.0
Cahaba--------	0-9	7-17	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.5-1.5	.24	.24	5	4.5-6.0
	9-53	18-35	1.35-1.60	0.6-2	0.12-0.20	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	53-90	4-20	1.40-1.70	2-6	0.05-0.10	0.0-2.9	0.0-0.0	.24	.24		4.5-6.0
LcB:											
Lucy----------	0-8	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	8-24	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	24-35	10-30	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	35-70	20-45	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
LcC:											
Lucy----------	0-8	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	8-24	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	24-35	10-30	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	35-70	20-45	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
LtE:											
Lucy----------	0-8	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	8-24	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	24-35	10-30	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	35-70	20-45	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
Troup---------	0-2	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	2-23	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	23-54	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	53-80	15-35	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
MIA:											
Mantachie-----	0-11	8-20	1.50-1.60	0.6-2	0.16-0.20	0.0-2.9	1.0-3.0	.28	.28	5	4.5-5.5
	11-61	18-34	1.50-1.60	0.6-2	0.14-0.20	0.0-2.9	0.2-1.0	.28	.28		4.5-5.5
Iuka----------	0-6	6-15	1.35-1.60	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	4.5-5.5
	6-22	8-18	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.2-1.0	.28	.28		4.5-5.5
	22-60	5-15	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.2-1.0	.20	.20		4.5-5.5
Kinston-------	0-12	5-27	1.30-1.50	0.6-2	0.14-0.20	0.0-2.9	2.0-5.0	.37	.37	5	4.5-5.5
	12-60	18-35	1.30-1.50	0.6-2	0.14-0.18	0.0-2.9	0.0-3.0	.32	.32		4.5-5.5
	60-72	1-10	1.40-1.60	6-20	0.03-0.10	0.0-2.9	0.0-0.0	.10	.10		4.5-5.5
MtA:											
Meggett-------	0-8	5-20	1.20-1.40	2-6	0.10-0.15	0.0-2.9	2.0-8.0	.24	.24	5	4.5-6.5
	8-16	30-60	1.45-1.60	0.06-0.2	0.13-0.18	6.0-8.9	0.2-1.0	.32	.32		5.1-8.4
	16-52	35-60	1.50-1.75	0.06-0.2	0.13-0.18	6.0-8.9	0.1-0.5	.32	.32		6.1-8.4
	52-65	25-50	1.40-1.60	.0015-0.	0.12-0.18	3.0-5.9	0.0-0.2	.28	.28		6.1-8.4

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors			Soil reaction
								Kw	Kf	T	
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
NaB:											
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	25-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
NcD:											
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	25-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
Cowarts-------	0-8	5-20	1.30-1.65	2-6	0.08-0.13	0.0-2.9	1.0-3.0	.24	.24	4	4.5-5.5
	8-19	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28		4.5-5.5
	19-25	25-40	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	25-60	18-35	1.65-1.80	0.2-0.6	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
NpE:											
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	27-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
Lucy----------	0-8	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10	5	4.5-6.0
	8-24	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	24-35	10-30	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	35-70	20-45	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
Springhill----	0-5	7-15	1.30-1.50	2-6	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	5	4.5-5.5
	5-11	7-18	1.30-1.50	2-6	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20		4.5-5.5
	11-45	18-35	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	45-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
NsE:											
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	33-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
Springhill----	0-5	7-15	1.30-1.50	2-6	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	5	4.5-5.5
	5-11	7-18	1.30-1.50	2-6	0.07-0.12	0.0-2.9	0.0-0.5	.20	.20		4.5-5.5
	11-45	18-35	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	45-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
Henderson-----	0-13	12-25	1.25-1.55	0.6-6	0.10-0.15	0.0-2.9	0.5-2.0	.20	.28	4	4.5-5.5
	13-49	40-60	1.30-1.55	0.06-0.2	0.10-0.14	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	49-65	35-60	1.30-1.55	0.06-0.2	0.10-0.14	0.0-2.9	0.0-0.0	.32	.28		4.5-5.5
OiA:											
Ocilla--------	0-4	6-12	1.50-1.60	6-20	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5	4.5-5.5
	4-28	6-12	1.50-1.60	6-20	0.05-0.10	0.0-2.9	0.2-1.0	.10	.10		4.5-5.5
	28-59	15-35	1.55-1.70	0.6-2	0.09-0.12	0.0-2.9	0.2-1.0	.24	.24		4.5-5.5
	59-67	15-40	1.55-1.70	0.6-2	0.09-0.12	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
Albany--------	0-7	1-7	1.35-1.65	6-20	0.03-0.08	0.0-2.9	0.5-2.0	.10	.10	5	3.5-6.5
	7-48	1-7	1.35-1.65	6-20	0.03-0.08	0.0-2.9	0.2-1.0	.10	.10		3.5-6.5
	48-56	1-20	1.50-1.70	0.6-2	0.08-0.10	0.0-2.9	0.2-1.0	.20	.20		3.5-6.0
	56-88	13-35	1.55-1.65	0.6-2	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24		3.5-6.0

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
OrA:											
Orangeburg----	0-7	7-15	1.30-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.20	.20	5	4.5-6.0
	7-12	7-18	1.50-1.65	2-6	0.09-0.12	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	12-54	18-35	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	54-72	18-45	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
OrB:											
Orangeburg----	0-7	7-15	1.30-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.20	.20	5	4.5-6.0
	7-12	7-18	1.50-1.65	2-6	0.09-0.12	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	12-54	18-35	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	54-72	18-45	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
OrC:											
Orangeburg----	0-7	7-15	1.30-1.50	2-6	0.07-0.10	0.0-2.9	0.5-1.0	.20	.20	5	4.5-6.0
	7-12	7-18	1.50-1.65	2-6	0.09-0.12	0.0-2.9	0.0-0.5	.20	.20		4.5-6.0
	12-54	18-35	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	54-72	18-45	1.60-1.75	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
PaA:											
Pansey--------	0-10	4-20	1.25-1.35	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	4.5-5.5
	10-20	14-25	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.2-1.0	.24	.24		4.5-5.5
	20-35	20-35	1.35-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	35-70	20-40	1.35-1.60	0.2-0.6	0.12-0.17	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
PeA:											
Pansey--------	0-10	4-20	1.25-1.35	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	4.5-5.5
	10-20	14-25	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.2-1.0	.24	.24		4.5-5.5
	20-35	20-35	1.35-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	35-70	20-40	1.35-1.60	0.2-0.6	0.12-0.17	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
PmA:											
Plummer-------	0-9	1-7	1.35-1.65	2-20	0.03-0.08	0.0-2.9	1.0-3.0	.10	.10	5	3.5-5.5
	9-50	1-7	1.35-1.65	2-20	0.03-0.08	0.0-2.9	0.2-1.0	.10	.10		3.5-5.5
	50-72	15-30	1.50-1.70	0.6-2	0.07-0.15	0.0-2.9	0.0-0.5	.15	.15		3.5-5.5
Pt:											
Pits, borrow--	0-60	---	---	---	---	---	0.0-0.0	---	---	---	---
RbA:											
Red Bay-------	0-6	7-20	1.40-1.55	2-6	0.07-0.14	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	6-20	10-25	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	20-52	18-35	1.30-1.50	0.6-2	0.12-0.17	0.0-2.9	0.0-0.5	.17	.17		4.5-5.5
	52-72	20-45	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
RbB:											
Red Bay-------	0-6	7-20	1.40-1.55	2-6	0.07-0.14	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	6-20	10-25	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	20-52	18-35	1.30-1.50	0.6-2	0.12-0.17	0.0-2.9	0.0-0.5	.17	.17		4.5-5.5
	52-72	20-45	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
RbC:											
Red Bay-------	0-6	7-20	1.40-1.55	2-6	0.07-0.14	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	6-20	10-25	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	20-52	18-35	1.30-1.50	0.6-2	0.12-0.17	0.0-2.9	0.0-0.5	.17	.17		4.5-5.5
	52-72	20-45	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
RvB:											
Riverview-----	0-6	10-27	1.30-1.60	0.6-2	0.16-0.24	0.0-2.9	0.5-2.0	.32	.32	5	4.5-6.5
	6-39	18-35	1.20-1.40	0.6-2	0.15-0.22	0.0-2.9	0.5-1.0	.24	.24		4.5-6.0
	39-70	4-18	1.20-1.50	2-6	0.07-0.11	0.0-2.9	0.2-1.0	.17	.17		4.5-6.0

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors Kw	Kf	T	Soil reaction
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
TnB:											
Troup----------	0-2	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	2-23	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	23-54	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	54-80	15-35	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
Bonifay--------	0-4	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	4-50	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	50-74	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-6.0
TnC:											
Troup----------	0-2	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	2-23	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	23-54	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	54-80	15-35	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
Bonifay--------	0-4	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	4-50	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	50-74	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-6.0
TyB:											
Troup----------	0-2	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	2-23	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	23-54	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-6.0
	54-80	15-35	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.20	.20		4.5-5.5
Lucy-----------	0-8	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.5	.10	.10	5	4.5-6.0
	8-24	1-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10		4.5-6.0
	24-35	10-30	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	35-70	20-45	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
UbA:											
Urban land.											
Bibb-----------	0-37	2-18	1.50-1.70	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3.5-5.5
	37-60	2-18	1.45-1.75	0.6-2	0.10-0.20	0.0-2.9	0.5-1.0	.37	.37		3.5-5.5
Kinston--------	0-12	5-27	1.30-1.50	0.6-2	0.14-0.20	0.0-2.9	2.0-5.0	.37	.37	5	4.5-5.5
	12-60	18-35	1.30-1.50	0.6-2	0.14-0.18	0.0-2.9	0.5-3.0	.32	.32		4.5-5.5
	60-65	1-10	1.40-1.60	6-20	0.03-0.10	0.0-2.9	0.2-1.0	.10	.10		4.5-5.5
UcA:											
Urban land.											
Clarendon------	0-15	2-10	1.40-1.60	2-6	0.08-0.12	0.0-2.9	0.5-3.0	.15	.15	5	4.5-6.5
	15-40	18-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.2-1.0	.20	.20		3.5-5.5
	40-80	15-40	1.40-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.0	.15	.15		3.5-5.5
Ardilla--------	0-9	4-17	1.30-1.70	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	4.5-6.0
	9-30	15-35	1.40-1.60	0.6-2	0.10-0.14	0.0-2.9	0.2-1.0	.28	.28		4.5-6.0
	30-60	20-40	1.50-1.70	0.2-0.6	0.10-0.15	0.0-2.9	0.0-0.0	.28	.28		4.5-5.5
UdB:											
Urban land.											
UdB:											
Dothan---------	0-6	5-15	1.30-1.60	2-6	0.04-0.09	0.0-2.9	0.5-1.0	.15	.15	5	4.5-6.0
	6-33	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28		4.5-6.0
	33-60	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.0	.28	.28		4.5-6.0

Table 19.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extens- ibility	Organic matter	Erosion factors			Soil reaction
								Kw	Kf	T	
	In	Pct	g/cc	In/hr	In/in	Pct	Pct				pH
UrB:											
Urban land.											
Red Bay-------	0-6	7-20	1.40-1.55	2-6	0.07-0.14	0.0-2.9	0.5-2.0	.20	.20	5	4.5-6.0
	6-20	10-25	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15		4.5-6.0
	20-52	18-35	1.30-1.50	0.6-2	0.12-0.17	0.0-2.9	0.0-0.5	.17	.17		4.5-5.5
	52-72	20-45	1.40-1.60	0.6-2	0.11-0.14	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
VaB:											
Varina--------	0-14	8-18	1.40-1.60	2-6	0.08-0.13	0.0-2.9	0.5-2.0	.24	.24	4	4.5-5.5
	14-38	35-60	1.30-1.50	0.6-2	0.12-0.18	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	38-81	30-55	1.30-1.50	0.06-0.2	0.06-0.09	0.0-2.9	0.0-0.5	.28	.28		4.5-5.5
	81-11	15-40	1.40-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.15	.15		4.5-5.5
WnB:											
Wicksburg-----	0-9	4-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10	5	4.5-5.5
	9-26	4-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-5.5
	26-30	25-40	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.5	.20	.20		4.5-5.5
	30-65	35-45	1.30-1.50	0.06-0.2	0.14-0.18	3.0-5.9	0.0-0.2	.24	.24		4.5-5.5
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	25-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5
WnC:											
Wicksburg-----	0-9	4-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.5-1.0	.10	.10	5	4.5-5.5
	9-26	4-12	1.30-1.70	6-20	0.04-0.09	0.0-2.9	0.0-0.5	.10	.10		4.5-5.5
	26-30	25-40	1.40-1.60	0.6-2	0.14-0.19	0.0-2.9	0.0-0.5	.20	.20		4.5-5.5
	30-65	35-45	1.30-1.50	0.06-0.2	0.14-0.18	3.0-5.9	0.0-0.2	.24	.24		4.5-5.5
Nankin--------	0-8	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3	4.5-5.5
	8-13	15-35	1.55-1.65	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	13-38	25-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	0.0-0.5	.24	.24		4.5-5.5
	38-65	20-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.0	.24	.24		4.5-5.5

Table 20.--Physical Analyses of Selected Soils

Soil name and sample number	Depth (In)	Depth (cm)	Horizon	Particle-size distribution (Percent less than 2.0 mm)		
				Sand (2.0-0.05 mm)	Silt (0.05-0.002 mm)	Clay (<0.002 mm)
Benevolence:						
S02AL-069-4(1-3)	0-10	(0-25)	Ap	84.9	7.4	7.7
	10-34	(25-86)	Bt1	78.6	8.6	12.8
	34-72	(86-183)	Bt2	62.5	3.8	33.7
Clarendon:						
C02AL-069-3(1-6)	0-12	(0-30)	Ap	79.9	12.1	8.0
	12-24	(30-61)	Bt	65.8	9.5	24.6
	24-32	(61-81)	Btv1	61.1	5.5	33.4
	32-46	(81-117)	Btv2	61.5	3.9	34.6
	46-69	(117-175)	Btv3	66.3	3.4	30.3
	69-80	(175-203)	BC	69.8	5.0	25.2
Kenansville:						
S02AL-069-2(1-7)	0-12	(0-30)	Ap	87.9	8.1	3.9
	12-20	(30-51)	E1	81.6	12.4	6.0
	20-31	(51-79)	E2	80.6	11.6	7.8
	31-49	(79-124)	Bt	69.2	10.0	20.8
	49-55	(124-140)	BC	71.8	10.1	18.1
	55-63	(140-160)	C1	78.4	9.2	12.5
	63-80	(160-203)	C2	77.9	12.0	10.1
Kolomki:						
S02AL-069-1(1-8)	0-13	(0-33)	Ap	84.7	10.2	5.1
	13-21	(33-53)	AB	73.5	15.4	11.1
	21-37	(53-94)	Bt	46.4	17.8	35.8
	37-44	(94-112)	BC	68.8	12.3	18.9
	44-52	(112-132)	C1	78.5	10.3	11.1
	52-60	(132-152)	C2	89.0	5.6	5.4
	60-71	(152-180)	C3	96.6	1.2	2.2
	71-80	(180-203)	C4	93.2	3.5	3.2

Table 21.--Chemical Analyses of Selected Soils

Soil name and sample number	Depth	Horizon	Organic carbon	Extractable bases (Ammonium acetate) Ca	Mg	K	Na	Sum	Extractable aluminum	Cation-exchange capacity CEC-7	ECEC	Base saturation sum of cations	pH 1:1 H2O
	in *cm*		*Pct*	*------------Milliequivalents per 100 grams of soil-----------*								*Pct*	
Benevolence:													
S02AL069-4(1-3)	0-10 (0-25)	A	1.33	0.45	0.11	0.05	0.05	0.66	0.20	2.05	0.86	32	4.78
	10-34 (25-86)	Bt1	0.00	0.02	0.02	0.03	0.04	0.11	0.62	1.37	0.73	8	4.60
	34-72 (86-183)	Bt2	0.00	0.78	0.26	0.05	0.08	1.17	0.22	2.06	1.38	45	5.12
Clarendon:													
S02AL069-3(1-6)	0-12 (0-30)	Ap	1.64	1.45	0.55	0.09	0.07	2.16	0.05	2.93	2.20	73	5.93
	12-24 (30-61)	Bt	0.00	0.80	0.37	0.04	0.05	1.26	0.71	3.30	1.97	38	4.67
	24-32 (61-81)	Btv1	0.00	0.79	0.44	0.03	0.07	1.33	1.14	3.37	2.46	39	4.75
	32-46 (81-117)	Btv2	0.00	0.40	0.27	0.02	0.07	0.76	1.46	3.30	2.22	23	4.58
	46-69 (117-175)	Btv3	0.00	0.15	0.20	0.01	0.06	0.42	1.18	2.18	1.60	19	4.63
	69-80 (175-203)	BC	0.00	0.08	0.13	0.01	0.06	0.28	1.02	1.94	1.29	14	4.65
Kenansville:													
S02AL069-2(1-7)	0-12 (0-30)	Ap	0.76	1.10	0.30	0.17	0.05	2.07	0.05	1.87	1.68	87	6.13
	12-20 (30-51)	E1	0.00	1.08	0.41	0.15	0.08	1.72	0.05	2.23	1.76	77	6.19
	20-31 (51-79)	E2	0.00	1.08	0.47	0.09	0.05	1.69	0.05	2.21	1.74	77	6.25
	31-49 (79-124)	Bt	0.00	2.43	1.05	0.09	0.00	3.57	0.05	5.24	3.63	68	6.10
	49-55 (124-140)	BC	0.00	1.99	0.83	0.06	0.04	2.92	0.87	5.29	3.78	55	5.03
	55-63 (140-160)	C1	0.00	1.23	0.63	0.05	0.06	1.97	0.61	4.00	2.59	50	5.00
	63-80 (160-203)	C2	0.00	0.99	0.83	0.04	0.04	1.90	0.48	3.89	2.38	49	5.00
Kolomoki:													
S02AL069-1(1-8)	0-13 (0-33)	Ap	1.03	0.85	0.33	0.10	0.06	1.34	0.05	2.35	1.40	57	5.72
	13-21 (33-53)	AB	0.40	1.20	0.46	0.08	0.04	2.04	0.05	2.62	1.83	68	5.93
	21-37 (53-94)	Bt	0.00	2.23	1.31	0.14	0.05	3.73	0.95	7.07	4.68	53	5.01
	37-44 (94-112)	BC	0.00	1.04	0.38	0.05	0.07	1.54	1.58	4.15	3.12	37	4.81
	44-52 (112-132)	C1	0.00	0.57	0.27	0.04	0.09	0.97	1.24	2.67	2.20	36	4.78
	52-60 (132-152)	C2	0.00	0.32	0.15	0.02	0.05	0.54	0.53	1.67	1.08	33	4.89
	60-71 (152-180)	C3	0.00	0.17	0.05	0.02	0.09	0.33	0.11	0.68	0.43	48	5.06
	71-80 (180-203)	C4	0.00	0.41	0.15	0.03	0.07	0.66	0.20	1.21	0.86	55	5.10

Table 22.--Classification of the Soils

Soil name	Family or higher taxonomic class
Albany	Loamy, siliceous, subactive, thermic Grossarenic Paleudults
Annemaine	Fine, mixed, semiactive, thermic Aquic Hapludults
Ardilla	Fine-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults
Benevolence	Coarse-loamy, kaolinitic, thermic Typic Kandiudults
Bibb	Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents
Bigbee	Thermic, coated Typic Quartzipsamments
Bonifay	Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults
Buncombe	Mixed, thermic Typic Udipsamments
Byars	Fine, kaolinitic, thermic Umbric Paleaquults
Cahaba	Fine-loamy, siliceous, semiactive, thermic Typic Hapludults
Clarendon	Fine-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults
Cowarts	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Dorovan	Dysic, thermic Typic Haplosaprists
Dothan	Fine-loamy, kaolinitic, thermic Plinthic Kandiudults
Dunbar	Fine, kaolinitic, thermic Aeric Paleaquults
Faceville	Fine, kaolinitic, thermic Typic Kandiudults
Fuquay	Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults
Goldsboro	Fine-loamy, siliceous, subactive, thermic Aquic Paleudults
Grady	Fine, kaolinitic, thermic Typic Paleaquults
Henderson	Fine, kaolinitic, thermic Typic Paleudults
Iuka	Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents
Kenansville	Loamy, siliceous, subactive, thermic Arenic Hapludults
Kinston	Fine-loamy, siliceous, semiactive, acid, thermic Typic Fluvaquents
Kolomoki	Fine, kaolinitic, thermic Typic Hapludults
Lucy	Loamy, kaolinitic, thermic Arenic Kandiudults
Mantachie	Fine-loamy, siliceous, active, acid, thermic Aeric Fluvaquents
Meggett	Fine, mixed, active, thermic Typic Albaqualfs
Nankin	Fine, kaolinitic, thermic Typic Kanhapludults
Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Orangeburg	Fine-loamy, kaolinitic, thermic Typic Kandiudults
Osier	Siliceous, thermic Typic Psammaquents
Pansey	Fine-loamy, siliceous, semiactive, thermic Plinthic Paleaquults
Plummer	Loamy, siliceous, subactive, thermic Grossarenic Paleaquults
Red Bay	Fine-loamy, kaolinitic, thermic Rhodic Kandiudults
Riverview	Fine-loamy, mixed, active, thermic Fluventic Dystrudepts
Springhill	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Troup	Loamy, kaolinitic, thermic Grossarenic Kandiudults
Varina	Fine, kaolinitic, thermic Plinthic Paleudults
Wahee	Fine, mixed, semiactive, thermic Aeric Endoaquults
Wicksburg	Fine, kaolinitic, thermic Arenic Paleudults

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