United States Department of Agriculture

NRCS

Natural Resources Conservation Service

In cooperation with the University of Georgia, College of Agricultural and Environmental Sciences, Agricultural Experiment Stations

Soil Survey of Screven County, Georgia

How To Use This Soil Survey

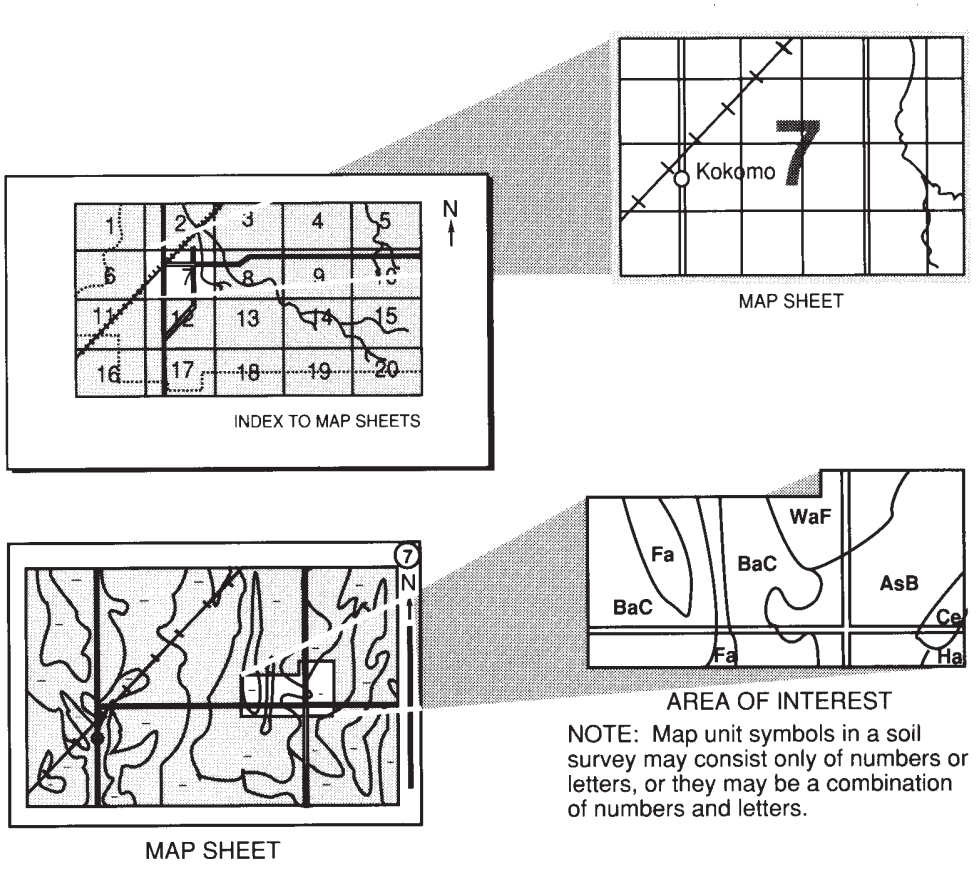
Detailed Soil Maps

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

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

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

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



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.

National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the University of Georgia, College of Agricultural and Environmental Sciences, Agricultural Experiment Stations. The survey is part of the technical assistance furnished to the Ogeechee River Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 2011. Soil names and descriptions were approved in 2011. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2011. The most current official data are available on the Internet.

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

Nondiscrimination Statement

Citation

The recommended citation for this survey is:

United States Department of Agriculture, Natural Resources Conservation Service. 2013. Soil Survey of Screven County, Georgia. http://soils.usda.gov/survey/printed_surveys/.

Cover Caption

The historic Savannah River, which forms the eastern border of Screven County. Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded, are on the flood plains along the river.

Contents

Issued 2013

Foreword

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

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

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

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service (http://www.nrcs.usda.gov/). Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

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

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

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Soil Survey of
Screven County, Georgia

By Gary C. Hankins, Jr., Natural Resources Conservation Service

Fieldwork by Gary C. Hankins, Jr.; Casey Sowell; Mack Thomas, Jr.;
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United States Department of Agriculture,
Natural Resources Conservation Service,
in cooperation with
the University of Georgia,
College of Agricultural and Environmental Sciences,
Agricultural Experiment Stations

Screven County is in the southeastern part of Georgia (fig. 1). It has a total area of 419,200 acres, or about 656 square miles. Sylvania is the county seat.

General Nature of the Survey Area

This section provides general information about the survey area. It describes history; farming; physiography, relief, and drainage; geology; and climate.

History

During pre-settlement times, Screven County was the home of the Yuchi Indians. They roamed areas along the Savannah River, Ogeechee River, and Brier Creek. The first European settlers, who arrived around 1750, were Germans. They entered the area from the Savannah River. In the 1760s, the population of settlers greatly increased. These settlers came from the Carolinas, Virginia, Maryland, and Pennsylvania. They also settled along the Savannah River, Ogeechee River, and Brier Creek. The area that is now Screven County was included in two of the eight Georgia parishes that were established in 1758. Most of the area that is now Screven County was in the St. Matthew Parish, but the upper portion north of Brier Creek was in the St. George Parish (Hollingsworth, 1989).

During the Revolutionary War, the first counties in Georgia were established. In 1777, the area that is now Screven County was part of Burke and Effingham Counties. On March 3, 1779, near present-day Brannen's Bridges, a British surprise attack defeated the Americans during the Battle of Brier Creek. The British controlled much of Screven County for the rest of the war (Hollingsworth, 1993).

After the war ended, the settlers enjoyed many new freedoms. In 1790, the Little Ogeechee Baptist Church became the first organized church in the area that is now Screven County. The present church building was built in 1912 and is still in use. The oldest church building in the county is Bethel Church, which was built in 1827 near Millhaven (Hollingsworth, 1993).

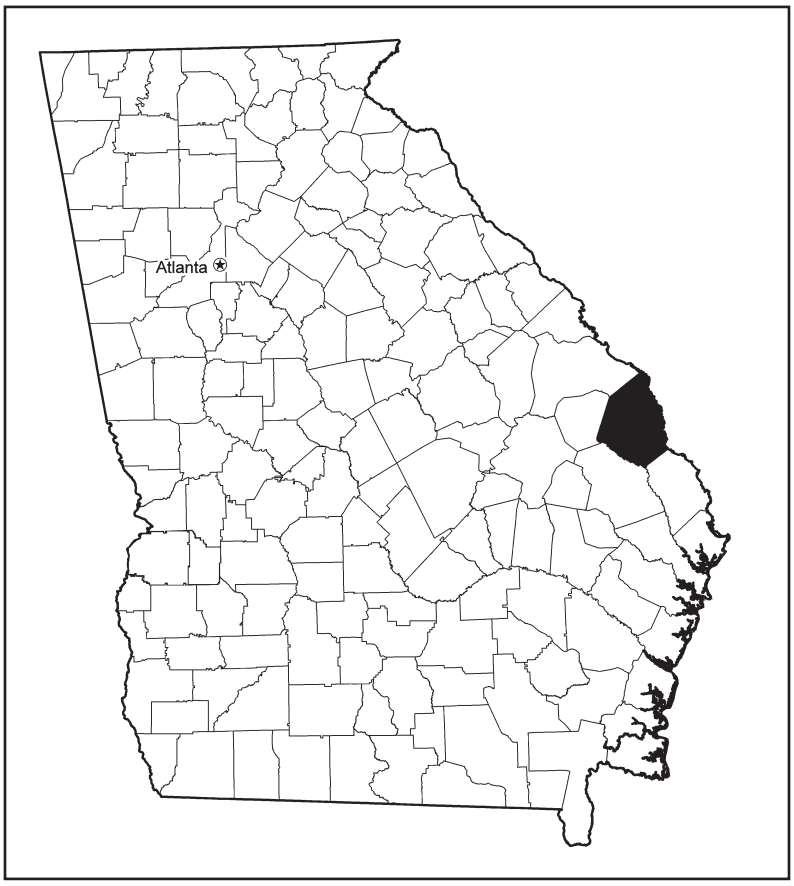

Figure 1.—Location of Screven County in Georgia.

Screven County was formed on December 14, 1793. It was named in honor of General James Screven, who served with distinction during the Revolutionary War. On March 2, 1776, while serving in Savannah as captain of the St. Johns Rangers, he helped stop the British from stealing ships loaded with rice and other produce. This was the first fighting of the Revolutionary War in Georgia. He later became a Brigadier General for the Georgia Militia. He died at age 34 during a skirmish with British forces near Midway around November 24, 1778 (Hollingsworth, 1993).

Screven County originally extended all the way to the Canoochee River and included the present locations of Statesboro, Metter, and Twin City. In 1796, Bulloch County was formed and all territory south of the Ogeechee River was transferred to Bulloch County. On February 16, 1799, Jacksonborough became the county seat for Screven County. At that time, Jacksonborough was a thriving frontier town 5 miles north of present-day Sylvania on Beaver Dam Creek. The town, which no longer exists, is now known for the story of “the curse of Lorenzo Dow.” Lorenzo Dow was a preacher who visited the town and was not received well. Mr. Seaborn Goodall was the only person who treated Lorenzo well. When Lorenzo left town, he prayed that God would destroy the town with the exception of Goodall’s home. Today, the only remains of the town are the home of Seaborn Goodall. Cursed or not, Jacksonborough was eventually doomed when the citizens voted to move the county seat in October of 1847. The county seat was eventually moved to Sylvania, which was incorporated in February 20, 1850 (Hollingsworth, 1989).

Screven County was also affected by the Civil War. Approximately 800 men served in the war, comprising the 25th and 47th Regiment of the Confederate infantry. The

Ogeechee Rifles, Black Creek Volunteers, and Brown's Light Infantry served in the 25th Regiment. The Screven Guards served in the 47th Regiment. During the famous "March to the Sea," General William Tecumseh Sherman entered Screven at Millen on December 3, 1864. His army was divided into 4 divisions under Generals Howard, Blair, Slocum, and Davis. Howard's troops marched below the Ogeechee River on the Bulloch County side. Blair's troops, which included General Sherman, traveled down Old Louisville Road. They destroyed the railroad as they marched along through present-day Scarboro, Rocky Ford, Dover, and Oliver. Slocum's troops followed the Middleground Road, passing near the present-day sites of Little Horse Creek Church, Goloid, Best's Bridge, and Newington. Davis's troops came into the county on Habersham Road, passing below Beaver Dam Creek and Brier Creek then marched southward along a path roughly corresponding to the present-day Highway 24. Sherman's 62,000 troops encountered very little resistance when passing through the area (Hollingsworth, 1993).

After the Civil War, the people struggled to revive the economy. Cotton farms slowly reappeared north of Brier Creek where cotton crops once flourished. Throughout the rest of the 19th and 20th century, agriculture was important to the economy. The addition of a finishing plant near Cooperville in the 1960s added a significant number of jobs to the county. The addition of Screven County Elementary School in 1990 also added jobs. Currently, the finishing plant, the school system, a sawmill in Oliver, and other businesses in and around Sylvania are the largest employers in the county.

Farming

Lamar Zipperer, retired Screven County extension agent, prepared this section.

Colonial agriculture in Screven County was greatly influenced by the major waterways of the county (Savannah River, Ogeechee River, and Briar Creek) and by the large land grants bestowed by the English King George to early European settlers. Plantation agriculture began via these waterways and large land holdings. For many years, the plantations and other farmer in the area grew mainly subsistence crops. Later, commercial crops, such as cotton, timber, and naval stores, produced in Screven County found their way to the port of Savannah via steamboats, rafts, and the early roads. These marketing routes connected to the inland towns of Augusta, Louisville, and others.

Throughout the nineteen hundreds until present day, agriculture in Screven County has been a kaleidoscope of change. Mules and horses gave way to electronically operated farm equipment. The drought plagued soils became more productive because of the development of irrigation and genetic engineering technology. Such agencies as the University of Georgia Cooperative Extension Service and the USDA Natural Resources Conservation Service provided technical advice that precipitated these changes.

During the 1950s and 1960s, the three most important agricultural enterprises were swine, beef cattle, and corn. Because of the boll weevil, cotton had almost disappeared by this time. In the 1970s and 1980s, soybeans became king.

Today, swine production is almost non-existent and cattle numbers are down. The acreage of soybeans has been drastically reduced. The acreage of cotton and peanuts has greatly increased due to advances in genetics. During the mid 1980s, much of the highly erodible cropland in Screven County was planted to pine trees under the government's Conservation Reserve Program. Recently, pine tree planting has become very popular, resulting in increasingly large amounts of cropland being planted to pines. The public concern regarding the availability of land for producing food, forage, fiber, and oilseed crops is identified in the "Prime Farmland and Farmland of Statewide Importance" section.

Physiography, Relief, and Drainage

Screven County is located in two major land resource areas. The southeastern corner of the county is in the Atlantic Coast Flatwoods Major Land Resource Area. The rest of the county is in the Southern Coastal Plain Major Land Resource Area. Elevations range from around 40 feet above mean sea level in the southeastern part of the county along the Savannah River to about 330 feet above mean sea level near the community of Bay Branch in the western part of the county a few miles west of Sylvania.

The upland soils in the Coastal Plain part of the county are mainly well drained. The very gently sloping and gently sloping soils are on the upper parts of hills, and the sloping soils are on hillsides. Many of these soils have a sandy surface layer overlying a loamy or clayey subsoil. The landscape is dissected by numerous small drainageways. The slopes on the ridges are generally smooth and convex, and the slopes on the hillsides commonly are irregular and convex. Most of the upland soils in the Flatwoods part of the county are on broad flats that are nearly level or gently sloping. These soils range from somewhat poorly drained to somewhat excessively drained and generally have a sandy surface layer overlaying a sandy subsurface layer or a loamy subsoil. The uplands are dissected by sluggish drains and depressions. In both the Coastal Plain and the Flatwoods, the content of organic matter in the surface horizons is higher in the soils in drains and depressions than in the soils on uplands. Also, the soils in the drains and depressions are often flooded and are sandy or loamy throughout.

Screven County is drained by the Savannah River, the Ogeechee River, and their tributaries. The Savannah River forms the eastern boundary of Screven County. The Ogeechee River forms the southwestern boundary. Most of northern parts of the county are drained by Brier Creek, which enters the Savannah River at Brier Creek Landing. Most of the central part of the county is drained by Beaverdam, Buck, and Ogeechee Creeks. Ogeechee Creek also drains much of the southern part of the county. In addition, several tributaries that enter the Ogeechee River drain the southern part of the county. These include Horse Creek, Mile Branch, Jackson Branch, Brady Branch, Douglas Branch, and Simmons Branch.

Geology

Mark Hall, geologist, Natural Resources Conservation Service, prepared this section.

Most of Screven County is located in the Vidalia Upland District of the Atlantic Coastal Plain Physiographic Province. The area has moderately dissected, well developed, dendritic drainages over gravelly and clayey sands. Flood plains are narrow, except along principal rivers, which have wide swamps bordering both sides of the channel. The southeast corner of the county, contiguous with Effingham County, is in the Barrier Island Sequence district and consists of former island and salt marsh environments.

The northwestern two-thirds of the county is underlain by the Altamaha Formation and Quaternary alluvium. The remainder of the county is underlain by the Cypresshead Formation with some exposures of the underlying Tiger Leap Member of the Parachucla Formation in the deeper incised stream valleys (Huddlestun, 1988). The Quaternary alluvium is in the area between Brier Creek and the Savannah River. It consists of sands, gravels, and limestone residuum. The Altamaha Formation is Miocene in age. Huddlestun (1988) describes the lithology as a nonfossiliferous, thin to thick bedded or crossbedded, well sorted to very poorly sorted, variably feldspathic, sporadically pebbly or gravelly, argillaceous sand, sandstone, sandy clay, clay, and claystone with no calcite or dolomite. The lithologies are typically thick bedded, massive, and structureless. He describes quartz sand as the dominant lithic component of the formation and clay as being significant and even dominant in some

localities. Beds or lenses of pure sand occur locally but are rare. The sands are well rounded to subangular. They range from fine to very coarse, and the larger quartz clasts are granule- to cobble-sized. The clay minerals are mostly kaolinite with only minor amounts of illite and smectite.

The Cypresshead Formation is described by Huddlestun (1988) as a Pliocene, coastal beach/sound type deposit which is, therefore, lithologically variable over short distances. It is primarily a quartz sand ranging in size from fine to pebbly with scattered gravel stringers. Bedding is variable in definition and thickness, and crossbedding is evident. Trace fossils are locally common, hence the scattered occurrence of bioturbated and burrowed beds.

The Tiger Leap Member of the Parachucla Formation is of early Miocene age and consists of argillaceous, fine grained, well sorted sand that is variably phosphatic, micaceous, calcareous, dolomitic, and fossiliferous. Carbonate consistently constitutes a significant part of this lithology (Huddlestun, 1988).

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Newington, Georgia, in the period 1971 to 1992. 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 50.8 degrees F and the average daily minimum temperature is 39.7 degrees. The lowest temperature on record, which occurred on January 21, 1985, is -1 degree. In summer, the average temperature is 81.0 degrees and the average daily maximum temperature is 91.0 degrees. The highest temperature, which occurred on July 13, 1980, is 110 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 49.18 inches. Of this, about 34.39 inches, or 70 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 6.88 inches on August 29, 1964. Thunderstorms occur on about 54 days each year, and most occur in July.

The average seasonal snowfall is 1.2 inches. The greatest snow depth at any one time during the period of record was 8 inches, recorded on February 11, 1973. The heaviest 1-day snowfall on record was 8.0 inches, also recorded on February 11, 1973. In most years, no days have at least 1 inch of snow on the ground.

The average relative humidity in mid-afternoon is about 52 percent. Humidity is higher at night, and the average at dawn is about 88 percent. The sun shines 66 percent of the time in summer and 57 percent in winter. The prevailing wind is from the south-southwest. Average wind speed is highest, 7.4 miles per hour, in 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 bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The

unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

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.

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.

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*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given 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, Fuquay loamy sand, 0 to 2 percent slopes, is a phase of the Fuquay series.

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

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Blanton-Foxworth complex, 0 to 5 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

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

Table 4 lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

AbA—Albany loamy sand, 0 to 2 percent slopes

Map Unit Composition

Albany and similar soils: About 90 percent

Minor Components

- Leefield soils, which are in positions similar to those of the Albany soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Meldrim soils, which are in the slightly higher positions and are moderately well drained

Characteristics of the Albany Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
10 to 25 inches—pale brown loamy sand that has yellowish brown mottles
25 to 47 inches—yellowish brown loamy sand that has light gray and brown mottles

Subsoil:
47 to 60 inches—gray sandy loam that has strong brown mottles
60 to 80 inches—light gray, red, and strong brown sandy clay loam

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 1 1/2 to 2 1/2 feet (apparent)
Flooding: None

Ponding: None
Permeability: Moderate
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3w
Hydrologic group: C

BdA—Bladen fine sandy loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Composition

Bladen and similar soils: About 80 percent

Minor Components

- Eulonia soils, which are in the slightly higher positions on stream terraces and are moderately well drained
- Ocilla soils, which are in the slightly higher positions on stream terraces, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Pelham soils, which are in the lower positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Bladen Soil

Setting
Landform: Stream terraces
Slope: Nearly level
Parent material: Clayey fluviomarine deposits

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

Subsurface layer:
7 to 9 inches—light brownish gray fine sandy loam that has brownish yellow mottles
9 to 14 inches—grayish brown fine sandy loam that has yellowish brown and light brownish gray mottles

Subsoil:
14 to 30 inches—gray clay that has dark red and yellowish brown mottles
30 to 41 inches—gray clay that has dark red and yellowish brown mottles
41 to 80 inches—dark gray clay that has red and strong brown mottles

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Occasional
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 6w
Hydrologic group: D

BeB—Blanton sand, 0 to 5 percent slopes

Map Unit Composition

Blanton and similar soils: About 85 percent

Minor Components

- Chipley soils, which are in the lower positions, are somewhat poorly drained, and are sandy throughout
- Foxworth soils, which are in positions similar to those of the Blanton soil and are sandy throughout
- Fuquay soils, which are in positions similar to those of the Blanton soil, are well drained, contain more than 5 percent plinthite at a depth of less than 60 inches, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Meldrim soils, which are in the slightly lower positions and are moderately well drained
- Uchee soils, which are in positions similar to those of the Blanton soil, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Blanton Soil

Setting
Landform: Broad interstream divides (fig. 2)
Slope: Nearly level and very gently sloping
Parent material: Sandy marine deposits, loamy marine deposits, or both

Figure 2.—Corn growing in an area of Blanton sand, 0 to 5 percent slopes. With proper management, such as irrigation, this soil can be productive for certain crops.

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

Subsurface layer:
8 to 42 inches—light olive brown sand
42 to 60 inches—pale yellow sand that has yellowish brown mottles
60 to 70 inches—pale yellow sand that has light brownish gray and strong brown mottles

Subsoil:
70 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has pale brown and strong brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Very low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

BfB—Blanton-Foxworth complex, 0 to 5 percent slopes

Map Unit Composition

Blanton and similar soils: About 70 percent
Foxworth and similar soils: About 20 percent

Minor Components

- Meldrim soils, which are in the slightly lower positions and are moderately well drained

Characteristics of the Blanton Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level and very gently sloping
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
8 to 42 inches—light olive brown sand
42 to 60 inches—pale yellow sand that has yellowish brown mottles
60 to 70 inches—pale yellow sand that has light brownish gray and strong brown mottles

Subsoil:
70 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has pale brown and strong brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Very low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

Characteristics of the Foxworth Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level and very gently sloping
Parent material: Sandy marine deposits

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

Underlying material:
8 to 35 inches—dark yellowish brown sand
35 to 47 inches—yellowish brown sand
47 to 57 inches—yellowish brown sand that has strong brown and light yellowish brown mottles
57 to 69 inches—very pale brown sand that has light gray and yellowish brown mottles
69 to 80 inches—light gray sand that has very pale brown and yellowish brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained and well drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Rapid
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

CAA—Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded

Map Unit Composition

Chastain and similar soils: About 60 percent
Tawcaw and similar soils: About 30 percent

Minor Components

- Pelham soils, which are in drainageways adjacent to the major soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

- Pickney soils, which are in adjacent drainageways; have a thick, dark surface layer; and are sandy throughout
- Surrency soils, which are in drainageways adjacent to the major soils; have a thick, dark surface layer; and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Chastain Soil

Setting
Landform: Flood plains (fig. 3)
Slope: Nearly level
Parent material: Silty and clayey alluvium

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

Subsoil:
4 to 25 inches—grayish brown clay that has yellowish red mottles
25 to 36 inches—grayish brown clay that has strong brown and yellowish red mottles

Substratum:
36 to 51 inches—grayish brown sandy clay loam that has strong brown mottles
51 to 58 inches—light brownish gray sandy clay loam that has strong brown mottles
58 to 80 inches—light brownish gray sand that has strong brown mottles

Figure 3.—Cypress trees that have distinctive water markings growing in an area of Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded.

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Frequent
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 7w
Hydrologic group: D

Characteristics of the Tawcaw Soil

Setting
Landform: Flood plains
Slope: Nearly level
Parent material: Silty and clayey alluvium

Typical profile
Surface layer:
0 to 2 inches—brown silty clay loam

Subsoil:
2 to 18 inches—yellowish brown silty clay loam that has pale brown mottles
18 to 39 inches—strong brown silty clay loam that has red and light brownish gray mottles
39 to 49 inches—strong brown silty clay loam that has red and light brownish gray mottles

Substratum:
49 to 80 inches—yellowish red loamy sand that has pale brown mottles

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 1 1/2 to 2 1/2 feet (apparent)
Flooding: Frequent
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 6w
Hydrologic group: C

ChA—Chipley sand, 0 to 2 percent slopes

Map Unit Composition

Chipley and similar soils: About 70 percent

Minor Components

- Blanton soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Foxworth soils, which are in the slightly higher positions and are moderately well and somewhat excessively drained
- Lakeland soils, which are in the higher positions and are excessively drained

- Ocilla soils, which are in positions similar to those of the Chipley soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Pelham soils, which are in the lower positions and are poorly drained

Characteristics of the Chipley Soil

Setting
Landform: Flats on marine terraces
Slope: Nearly level
Parent material: Sandy marine deposits

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

Underlying material:
8 to 20 inches—brownish yellow sand
20 to 28 inches—brownish yellow sand that has strong brown and light gray mottles
28 to 35 inches—brownish yellow sand
35 to 59 inches—yellow sand that has strong brown and light gray mottles
59 to 66 inches—light gray sand that has yellowish brown and pale brown mottles
66 to 80 inches—light gray sand that has light reddish brown, strong brown, and pale brown mottles

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 2 to 3 feet (apparent)
Flooding: None
Ponding: None
Permeability: Rapid
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: C

CnA—Clarendon loamy sand, 0 to 2 percent slopes

Map Unit Composition

Clarendon and similar soils: About 70 percent

Minor Components

- Dothan and Norfolk soils, which are in the slightly higher positions and are well drained
- Leefield soils, which are in the slightly lower positions, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Stilson soils, which are in positions similar to those of the Clarendon soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Clarendon Soil

Setting
Landform: Flats on marine terraces and flats on broad interstream divides
Slope: Nearly level
Parent material: Loamy marine deposits

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

Subsurface layer:
6 to 16 inches—light yellowish brown loamy sand

Subsoil:
16 to 21 inches—light yellowish brown sandy loam
21 to 26 inches—light yellowish brown sandy clay loam that has yellowish brown, strong brown, and pale brown mottles
26 to 38 inches—brownish yellow sandy clay loam that has strong brown, yellowish brown, light brownish gray, and pale brown mottles
38 to 52 inches—light brownish gray sandy clay loam that has red, yellowish brown, and pale brown mottles
52 to 62 inches—light gray sandy clay loam that has red and yellowish brown mottles
62 to 80 inches—light gray sandy clay loam that has red and yellowish brown mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 2 to 3 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2w
Hydrologic group: C

CoB—Cowarts loamy sand, 2 to 5 percent slopes

Map Unit Composition

Cowarts and similar soils: About 85 percent

Minor Components

- Dothan soils, which are in the smoother, less sloping positions and contain more than 5 percent plinthite within a depth of 60 inches
- Gritney soils, which are in positions similar to those of the Cowarts soil and have a seasonal high water table at a depth of 18 to 36 inches
- Nankin soils, which are in positions similar to those of the Cowarts soil, are in a fine textural family, and are redder than Cowarts soils
- Norfolk soils, which are in the smoother, less sloping positions and contain less than 5 percent plinthite within a depth of 60 inches

Characteristics of the Cowarts Soil

Setting
Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Loamy marine deposits

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

Subsoil:
8 to 14 inches—yellowish brown sandy loam
14 to 24 inches—strong brown sandy clay loam
24 to 30 inches—strong brown sandy clay loam that has pale brown, brownish yellow, and red mottles
30 to 38 inches—red, strong brown, and light gray sandy loam

Substratum:
38 to 60 inches—red, strong brown, and light gray coarse sandy loam
60 to 80 inches—light gray, red, and strong brown loamy sand

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: C

CtB—Cowarts-Gritney-Urban land complex, 2 to 5 percent slopes

Map Unit Composition

Cowarts and similar soils: About 40 percent
Gritney and similar soils: About 30 percent
Urban land and similar areas: About 25 percent

Minor Components

- Nankin soils, which are in positions similar to those of the Cowarts and Gritney soils, are well drained, and have a subsoil that is 40 to 60 inches thick

Characteristics of the Cowarts Soil

Setting
Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Loamy marine deposits

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

Subsoil:
8 to 14 inches—yellowish brown sandy loam
14 to 24 inches—strong brown sandy clay loam
24 to 30 inches—strong brown sandy clay loam that has pale brown, brownish yellow, and red mottles
30 to 38 inches—red, strong brown, and light gray sandy loam

Substratum:
38 to 60 inches—red, strong brown, and light gray coarse sandy loam
60 to 80 inches—light gray, red, and strong brown loamy sand

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: C

Characteristics of the Gritney Soil

Setting
Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Clayey marine deposits

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

Subsoil:
8 to 18 inches—yellowish brown sandy clay that has red mottles
18 to 50 inches—reddish brown, yellowish brown, and light gray sandy clay

Substratum:
50 to 80 inches—light gray clay loam that has yellowish brown and reddish brown mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 1$^{1}/_{2}$ to 3 feet (perched)
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: C

Characteristics of the Urban Land

- Urban land consists of areas that have been altered by cutting, filling, and shaping. Schools, parking lots, streets, commercial buildings, and residential dwellings are in these areas.

CuD—Cowarts-Uchee-Blanton complex, 8 to 12 percent slopes

Map Unit Composition

Cowarts and similar soils: About 45 percent
Uchee and similar soils: About 30 percent
Blanton and similar soils: About 10 percent

Minor Components

- Nankin soils, which are finer and redder than the Cowarts, Uchee, and Blanton soils

Characteristics of the Cowarts Soil

Setting
Landform: Broad interstream divides (fig. 4)
Slope: Sloping
Parent material: Loamy marine deposits

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

Subsoil:
8 to 14 inches—yellowish brown sandy loam
14 to 24 inches—strong brown sandy clay loam
24 to 30 inches—strong brown sandy clay loam that has pale brown, brownish yellow, and red mottles
30 to 38 inches—red, strong brown, and light gray sandy loam

Substratum:
38 to 60 inches—red, strong brown, and light gray coarse sandy loam
60 to 80 inches—light gray, red, and strong brown loamy sand

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None

Figure 4.—Rock outcrop in an area of Cowarts soil in Cowarts-Uchee-Blanton complex, 8 to 12 percent slopes. Rock outcrop is common in the west-central part of Screven County.

Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 6e
Hydrologic group: C

Characteristics of the Uchee Soil

Setting
Landform: Broad interstream divides
Slope: Sloping
Parent material: Loamy marine deposits

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

Subsurface layer:
6 to 14 inches—yellowish brown sand
14 to 27 inches—brownish yellow sand
27 to 35 inches—brownish yellow loamy sand

Subsoil:
35 to 41 inches—brownish yellow sandy clay loam
41 to 53 inches—strong brown, yellowish red, brownish yellow, and light gray clay

Substratum:
53 to 80 inches—strong brown, yellowish red, brownish yellow, and light gray sandy clay loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 3½ to 5 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 6s
Hydrologic group: A

Characteristics of the Blanton Soil

Setting
Landform: Broad interstream divides
Slope: Sloping
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
8 to 42 inches—light olive brown sand
42 to 60 inches—pale yellow sand that has yellowish brown mottles
60 to 70 inches—pale yellow sand that has light brownish gray and strong brown mottles

Subsoil:
70 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has pale brown and strong brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Very low
Depth class: Very deep

Interpretive groups
Land capability classification: 6s
Hydrologic group: A

DcA—Dothan-Clarendon complex, 0 to 2 percent slopes

Map Unit Composition

Dothan and similar soils: About 60 percent
Clarendon and similar soils: About 27 percent

Minor Components

- Fuquay soils, which are in positions similar to those of the Dothan and Clarendon soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Leefield soils, which are in the slightly lower positions, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Dothan Soil

Setting
Landform: Flats on marine terraces
Slope: Nearly level
Parent material: Loamy marine deposits

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

Subsurface layer:
9 to 17 inches—yellowish brown loamy sand

Subsoil:
17 to 42 inches—yellowish brown sandy loam
42 to 52 inches—yellowish brown sandy clay loam that has strong brown mottles
52 to 62 inches—yellowish brown sandy clay loam that has yellowish red, strong brown, pale brown, and light brownish gray mottles
62 to 68 inches—light brownish gray, strong brown, and yellowish brown sandy clay loam
68 to 74 inches—red, strong brown, light yellowish brown, and light brownish gray sandy clay loam
74 to 80 inches—light gray, very pale brown, and yellowish brown sandy clay loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 3 to 5 feet (perched)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 1
Hydrologic group: B

Characteristics of the Clarendon Soil

Setting
Landform: Flats on marine terraces
Slope: Nearly level
Parent material: Loamy marine deposits

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

Subsurface layer:
6 to 16 inches—light yellowish brown loamy sand

Subsoil:
16 to 21 inches—light yellowish brown sandy clay loam
21 to 26 inches—light yellowish brown sandy clay loam that has yellowish brown, strong brown, and pale brown mottles
26 to 38 inches—brownish yellow sandy clay loam that has strong brown, yellowish brown, light brownish gray, and pale brown mottles
38 to 52 inches—light brownish gray sandy clay loam that has red, yellowish brown, and pale brown mottles
52 to 62 inches—light gray sandy clay loam that has red and yellowish brown mottles
62 to 80 inches—light gray sandy clay loam that has red and yellowish brown mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 2 to 3 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2w
Hydrologic group: C

DnA—Dothan-Norfolk complex, 0 to 2 percent slopes

Map Unit Composition

Dothan and similar soils: About 65 percent
Norfolk and similar soils: About 20 percent

Minor Components

- Clarendon soils, which are in the slightly lower positions and are moderately well drained
- Fuquay soils, which are in positions similar to those of the Dothan and Norfolk soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Leefield soils, which are in the lower positions and are somewhat poorly drained

Characteristics of the Dothan Soil

Setting
Landform: Flats on broad interstream divides
Slope: Nearly level
Parent material: Loamy marine deposits

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

Subsurface layer:
9 to 17 inches—yellowish brown loamy sand

Subsoil:
17 to 42 inches—yellowish brown sandy loam
42 to 52 inches—yellowish brown sandy clay loam that has strong brown mottles
52 to 62 inches—yellowish brown sandy clay loam that has yellowish red, strong brown, pale brown, and light brownish gray mottles
62 to 68 inches—light brownish gray, strong brown, and yellowish brown sandy clay loam
68 to 74 inches—red, strong brown, light yellowish brown, and light brownish gray sandy clay loam
74 to 80 inches—light gray, very pale brown, and yellowish brown sandy clay loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 3 to 5 feet (perched)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 1
Hydrologic group: B

Characteristics of the Norfolk Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Loamy marine deposits

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

Subsoil:
10 to 17 inches—reddish yellow sandy loam
17 to 30 inches—reddish yellow sandy clay loam

30 to 55 inches—reddish yellow sandy clay loam
55 to 80 inches—reddish yellow sandy clay loam that has light brownish gray and red mottles

Properties and qualities
Drainage class: Well drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 1
Hydrologic group: B

DnB—Dothan-Norfolk complex, 2 to 5 percent slopes

Map Unit Composition

Dothan and similar soils: About 65 percent
Norfolk and similar soils: About 25 percent

Minor Components

- Clarendon soils, which are in the slightly lower positions and are moderately well drained
- Cowarts soils, which are on slope breaks and have a subsoil that is 20 to 40 inches thick
- Fuquay soils, which are in positions similar to those of the Dothan and Norfolk soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Leefield soils, which are in the lower positions and are somewhat poorly drained

Characteristics of the Dothan Soil

Setting
Landform: Flats on broad interstream divides (fig. 5)
Slope: Very gently sloping
Parent material: Loamy marine deposits

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

Subsurface layer:
9 to 17 inches—yellowish brown loamy sand

Subsoil:
17 to 42 inches—yellowish brown sandy loam
42 to 52 inches—yellowish brown sandy clay loam that has strong brown mottles
52 to 62 inches—yellowish brown sandy clay loam that has yellowish red, strong brown, pale brown, and light brownish gray mottles
62 to 68 inches—light brownish gray, strong brown, and yellowish brown sandy clay loam
68 to 74 inches—red, strong brown, light yellowish brown, and light brownish gray sandy clay loam
74 to 80 inches—light gray, very pale brown, and yellowish brown sandy clay loam

Figure 5.—Peanuts that are ready to harvest in an area of Dothan soil in Dothan-Norfolk complex, 2 to 5 percent slopes. This soil is considered prime farmland and is well suited for cultivated crops.

Properties and qualities

Drainage class: Well drained
Depth to water table: About 3 to 5 feet (perched)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups

Land capability classification: 2e
Hydrologic group: B

Characteristics of the Norfolk Soil

Setting

Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Loamy marine deposits

Typical profile

Surface layer:
0 to 10 inches—brown loamy sand

Subsoil:
10 to 17 inches—reddish yellow sandy loam
17 to 30 inches—reddish yellow sandy clay loam
30 to 55 inches—reddish yellow sandy clay loam

55 to 80 inches—reddish yellow sandy clay loam that has light brownish gray and red mottles

Properties and qualities
Drainage class: Well drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: B

EuA—Eulonia sandy loam, 0 to 3 percent slopes

Map Unit Composition

Eulonia and similar soils: About 80 percent

Minor Components

- Bladen soils, which are in the slightly lower positons and are poorly drained
- Ocilla soils, which in the slightly lower positons on stream terraces, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Eulonia Soil

Setting
Landform: Stream terraces
Slope: Nearly level
Parent material: Clayey fluviomarine deposits

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

Subsurface layer:
8 to 13 inches—light yellowish brown sandy loam

Subsoil:
13 to 24 inches—red sandy clay that has strong brown mottles
24 to 34 inches—red clay that has yellowish red, strong brown, and light brownish gray mottles
34 to 44 inches—grayish brown sandy clay that has red, yellowish red, and strong brown mottles
44 to 60 inches—grayish brown sandy clay loam that has red, strong brown, and yellowish brown mottles

Substratum:
60 to 80 inches—variegated red, strong brown, yellowish brown, and grayish brown sandy clay loam

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 1 1/2 to 3 1/2 feet (apparent)
Flooding: None

Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2w
Hydrologic group: C

FoA—Foxworth sand, 0 to 2 percent slopes

Map Unit Composition

Foxworth and similar soils: About 90 percent

Minor Components

- Blanton soils, which are in positions similar to those of the Foxworth soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Chipey soils, which are in the lower positions and are somewhat poorly drained
- Fuquay soils, which are in positions similar to those of the Foxworth soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Lakeland soils, which are in the higher postions and are excessively drained
- Meldrim soils, which are in the lower positions, have a water table at a depth of 30 to 40 inches, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Characteristics of the Foxworth Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Sandy marine deposits

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

Underlying material:
8 to 35 inches—dark yellowish brown sand
35 to 47 inches—yellowish brown sand
47 to 57 inches—yellowish brown sand that has light yellowish brown and strong brown mottles
57 to 69 inches—very pale brown sand that has yellowish brown and light gray mottles
69 to 80 inches—light gray sand that has pale brown and yellowish brown mottles

Properties and qualities
Drainage class: Moderately well drained to somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Rapid
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

FuA—Fuquay loamy sand, 0 to 2 percent slopes

Map Unit Composition

Fuquay and similar soils: About 80 percent

Minor Components

- Blanton soils, which are in positions similar to those of the Fuquay soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Clarendon soils, which are in the slightly lower positions and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Dothan and Norfolk soils, which are in positions similar to those of the Fuquay soil and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Foxworth soils, which are in positions similar to those of the Fuquay soil and are sandy throughout
- Leefield soils, which are in the slightly lower positions and are somewhat poorly drained
- Stilson soils, which are are in the slightly lower positions and are moderately well drained
- Uchee soils, which are in positions similar to those of the Fuquay soil and have less than 5 percent plinthite within a depth of 60 inches

Characteristics of the Fuquay Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
9 to 28 inches—yellowish brown loamy sand

Subsoil:
28 to 38 inches—yellowish brown sandy loam
38 to 44 inches—yellowish brown sandy clay loam that has strong brown mottles
44 to 56 inches—yellowish brown sandy clay loam that has strong brown mottles
56 to 63 inches—pale brown sandy clay loam that has yellowish red, yellowish brown, and gray mottles
63 to 80 inches—yellowish brown, light brownish gray, and yellowish red sandy loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 4 to 6 feet (perched)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2s
Hydrologic group: B

GCA—Grady and Croatan soils, 0 to 2 percent slopes, ponded

Map Unit Composition

Grady and similar soils: About 65 percent
Croatan and similar soils: About 30 percent

Minor Components

- Pelham soils, which are in drainageways, have a dark surface layer less than 10 inches thick, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Pickney soils, which are in drainageways, are sandy throughout, and have a thick, dark, mineral surface layer
- Surrency soils, which are in drainageways; have a thick, dark, mineral surface layer; and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Grady Soil

Setting
Landform: Depressions
Slope: Nearly level
Parent material: Clayey marine deposits

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

Subsoil:
5 to 20 inches—gray clay that has strong brown mottles
20 to 54 inches—gray clay that has red and yellowish brown mottles
54 to 65 inches—gray sandy clay that has gray, yellowish red, and yellowish brown mottles
65 to 80 inches—gray clay that has brown mottles

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface (apparent)
Flooding: None
Ponding: Frequent
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: D

Characteristics of the Croatan Soil

Setting
Landform: Depressions
Slope: Nearly level
Parent material: Organic material over loamy marine deposits (fig. 6)

Typical profile
Organic layer:
0 to 4 inches—dark brown mucky peat

Figure 6.—Organic material on the surface of a Croatan soil in an area of Grady-Croatan soils, 0 to 2 percent slopes, ponded. This soil is primarily in the middle of depressions where deep organic layers tend to accumulate.

4 to 12 inches—very dark brown muck
12 to 24 inches—black muck
24 to 28 inches—black muck

Surface layer:
28 to 60 inches—black mucky fine sandy loam that has yellowish brown and light brownish gray mottles

Substratum:
60 to 80 inches—light brownish gray sandy clay loam

Properties and qualities
Drainage class: Very poorly drained
Depth to water table: At the surface (apparent)
Flooding: None
Ponding: Frequent
Permeability: Moderately slow
Available water capacity: Very high
Depth class: Very deep

Interpretive groups
Land capability classification: 7w
Hydrologic group: D

GrB—Gritney loamy sand, 2 to 5 percent slopes

Map Unit Composition

Gritney and similar soils: About 80 percent

Minor Components

- Cowarts soils, which are in positions similar to those of the Gritney soil, are well drained, and have a solum that ranges from 20 to 40 inches in thickness
- Nankin soils, which are in positions similar to those of the Gritney soil and are well drained

Characteristics of the Gritney Soil

Setting
Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Clayey marine deposits

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

Subsoil:
8 to 18 inches—yellowish brown sandy clay that has red mottles
18 to 50 inches—reddish brown, yellowish brown, and light gray sandy clay

Substratum:
50 to 80 inches—light gray clay loam that has yellowish brown and reddish brown mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 1 1/2 to 3 feet (perched)
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: C

HMA—Herod and Muckalee loams, 0 to 2 percent slopes, frequently flooded

Map Unit Composition

Herod and similar soils: About 50 percent
Muckalee and similar soils: About 40 percent

Minor Components

- Pickney soils, which are in drainageways adjacent to the major soils and are sandy throughout

Characteristics of the Herod Soil

Setting
Landform: Flood plains
Slope: Nearly level
Parent material: Loamy alluvium

Typical profile
Surface layer:
0 to 6 inches—very dark grayish brown loam
6 to 10 inches—light brownish gray sandy loam

Substratum:
10 to 22 inches—gray sandy loam that has yellowish brown mottles
22 to 39 inches—gray sandy clay loam that has light yellowish brown and yellowish brown mottles
39 to 80 inches—gray sand

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Frequent
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: D

Characteristics of the Muckalee Soil

Setting
Landform: Flood plains
Slope: Nearly level
Parent material: Sandy alluvium, loamy alluvium, or both

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

Substratum:
6 to 55 inches—gray sandy loam that has strong brown and yellowish brown mottles
55 to 80 inches—gray sandy loam

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Frequent
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: D

KBA—Kinston and Bibb soils, 0 to 2 percent slopes, frequently flooded

Map Unit Composition

Kinston and similar soils: About 57 percent
Bibb and similar soils: About 23 percent

Minor Components

- Pickney soils, which are in drainageways adjacent to the major soils; have a thick, dark surface layer; and are sandy throughout

Characteristics of the Kinston Soil

Setting
Landform: Flood plains
Slope: Nearly level
Parent material: Loamy alluvium

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

Substratum:
6 to 23 inches—gray sandy loam that has brownish yellow and yellowish brown mottles
23 to 48 inches—gray sandy clay loam that has pale brown, yellowish red, and strong brown mottles
48 to 80 inches—grayish brown sandy loam that has pale brown and yellowish brown mottles

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Frequent
Ponding: None
Permeability: Moderate
Available water capacity: High
Depth class: Very deep

Interpretive groups
Land capability classification: 6w
Hydrologic group: D

Characteristics of the Bibb Soil

Setting
Landform: Flood plains
Slope: Nearly level
Parent material: Loamy alluvium

Typical profile
Surface layer:
0 to 8 inches—very dark grayish brown sandy loam
8 to 14 inches—light gray loamy sand

Substratum:
14 to 21 inches—light brownish gray sandy loam that has yellowish brown mottles
21 to 55 inches—gray sandy loam that has yellowish brown and red mottles
55 to 80 inches—gray, red, and yellowish brown sandy loam

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: Frequent
Ponding: None
Permeability: Moderate
Available water capacity: High
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: D

LaC—Lakeland sand, 1 to 8 percent slopes

Map Unit Composition

Lakeland and similar soils: About 90 percent

Minor Components

- Chipley soils, which are in the lower positions and are somewhat poorly drained
- Foxworth soils, which are in the slightly lower positions and are moderately well drained to somewhat excessively drained

Characteristics of the Lakeland Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level to gently sloping
Parent material: Sandy marine deposits

Typical profile
Surface layer:
0 to 5 inches—brown sand

Substratum:
5 to 20 inches—yellowish brown sand
20 to 72 inches—strong brown sand
72 to 80 inches—reddish yellow sand

Properties and qualities
Drainage class: Excessively drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Rapid
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 4s
Hydrologic group: A

LeA—Leefield loamy sand, 0 to 2 percent slopes

Map Unit Composition

Leefield and similar soils: About 85 percent

Minor Components

- Albany soils, which are in positions similar to those of the Leefield soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Clarendon soils, which are in the slightly higher positions, do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more, and are moderately well drained
- Dothan and Norfolk soils, which are in the higher positions, do not have sandy surface and subsurface layers with a combined thickness of more than 20 inches, and are well drained
- Fuquay soils, which are in the higher positions and are well drained
- Pelham soils, which are in the slightly lower positions and are poorly drained

- Rigdon soils, which are in positions similar to those of the Leefield soil and do have a subsoil horizon that contains accumulations of organic matter and compounds of aluminum and iron
- Stilson soils, which are are in the slightly higher positions and are moderately well drained

Characteristics of the Leefield Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
10 to 24 inches—light yellowish brown loamy sand that has strong brown and yellowish brown mottles
24 to 29 inches—light yellowish brown loamy sand that has strong brown, yellowish brown, and light gray mottles

Subsoil:
29 to 34 inches—light yellowish brown sandy loam that has strong brown, yellowish brown, and light gray mottles
34 to 41 inches—yellowish brown sandy clay loam that has yellowish red, strong brown, and light brownish gray mottles
41 to 53 inches—light brownish gray sandy clay loam that has red and yellowish brown mottles
53 to 71 inches—red, strong brown, light yellowish brown, and light brownish gray sandy clay loam
71 to 80 inches—yellowish red, red, dark yellowish brown, light brownish gray, and strong brown sandy clay loam

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 1 1/2 to 2 1/2 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 3w
Hydrologic group: C

MeB—Meldrim sand, 0 to 5 percent slopes

Map Unit Composition

Meldrim and similar soils: About 70 percent

Minor Components

- Albany soils, which are in the lower positions adjacent to the Meldrim soil and are somewhat poorly drained
- Blanton soils, which are in the slightly higher positions and are well drained

- Foxworth soils, which are in the higher positions, have a seasonal high water table below a depth of 40 inches, and are sandy throughout
- Stilson soils, which are in positions similar to those of the Meldrim soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Uchee soils, which are in the slightly higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are well drained

Characteristics of the Meldrim Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level and very gently sloping
Parent material: Sandy marine deposits, loamy marine deposits, or both

Typical profile
Surface layer:
0 to 5 inches—very dark grayish brown sand

Subsurface layer:
5 to 19 inches—brownish yellow sand
19 to 37 inches—brownish yellow sand that has strong brown and yellowish brown mottles
37 to 50 inches—yellow sand that has yellowish red, strong brown, yellowish brown, and light gray mottles

Subsoil:
50 to 56 inches—light yellowish brown loamy fine sand that has yellowish red, strong brown, yellowish brown, and light gray mottles
56 to 63 inches—light yellowish brown sandy loam that has yellowish red, strong brown, and light gray mottles
63 to 80 inches—light brownish gray sandy clay loam that has yellowish red, strong brown, and light gray mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 2.5 to 3.3 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

NaB—Nankin loamy sand, 2 to 5 percent slopes

Map Unit Composition

Nankin and similar soils: About 75 percent

Minor Components

- Cowarts soils, which are in positions similar to those of the Nankin soil and have a solum thickness of 20 to 40 inches
- Gritney soils, which are in the slightly lower positions and have a seasonal high water table at a depth of 18 to 36 inches

Characteristics of the Nankin Soil

Setting
Landform: Broad interstream divides
Slope: Very gently sloping
Parent material: Clayey marine deposits

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

Subsoil:
10 to 28 inches—dark red sandy clay
28 to 51 inches—dark red sandy clay that has strong brown and brown mottles

Substratum:
51 to 80 inches—dark red, pale brown, and light gray sandy loam

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2e
Hydrologic group: C

NcC2—Nankin-Cowarts complex, 5 to 8 percent slopes, eroded

Map Unit Composition

Nankin and similar soils: About 65 percent
Cowarts and similar soils: About 30 percent

Minor Components

- Gritney soils, which are in the lower positions and have a seasonal high water table at a depth of 18 to 36 inches
- Uchee soils, which are in positions similar to those of the Nankin and Cowarts soils and have sandy surface and subsurface horizons with a combined thickness of 20 to 40 inches

Characteristics of the Nankin Soil

Setting
Landform: Broad interstream divides
Slope: Gently sloping
Parent material: Clayey marine deposits

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

Subsoil:
4 to 16 inches—strong brown sandy clay

16 to 28 inches—strong brown clay that has red mottles
28 to 41 inches—yellowish red, red, dusky red, and light gray sandy clay
41 to 47 inches—dusky red, yellowish brown, light gray, and red sandy clay loam

Substratum:
47 to 80 inches—yellowish red, red, light gray, and pale brown sandy loam

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 4e
Hydrologic group: C

Characteristics of the Cowarts Soil

Setting
Landform: Broad interstream divides
Slope: Gently sloping
Parent material: Loamy marine deposits

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

Subsoil:
4 to 25 inches—strong brown sandy clay loam
25 to 36 inches—yellowish red sandy clay loam

Substratum:
36 to 80 inches—red, strong brown, and light gray sandy loam

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 4e
Hydrologic group: C

OcA—Ocilla loamy sand, 0 to 2 percent slopes

Map Unit Composition

Ocilla and similar soils: About 95 percent

Minor Components

- Bladen soils, which are in the lower positions along stream terraces, are in a fine textural family, and are poorly drained

- Chipley soils, which are in positions similar to those of the Ocilla soil and are sandy throughout
- Eulonia soils, which are on the higher stream terraces, are in a fine textural family, and are moderately well drained
- Pelham soils, which are in the lower positions and are poorly drained
- Rains soils, which are in the lower positions and are poorly drained
- Rigdon soils, which are in the slightly lower positions and have a subsoil horizon that contains accumulations of organic matter and compounds of aluminum and iron

Characteristics of the Ocilla Soil

Setting
Landform: Stream terraces
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

Typical profile
Surface layer:
0 to 7 inches—dark grayish brown loamy sand

Subsurface layer:
7 to 16 inches—light brownish gray loamy sand
16 to 21 inches—yellowish brown loamy sand

Subsoil:
21 to 25 inches—yellowish brown sandy loam that has red, yellowish red, and pale brown mottles
25 to 32 inches—yellowish brown sandy clay loam that has gray, yellowish red, and pale brown mottles
32 to 80 inches—light brownish gray sandy clay loam that has red and yellowish brown mottles

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 1 to 2½ feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3w
Hydrologic group: C

PeA—Pelham loamy sand, 0 to 2 percent slopes

Map Unit Composition

Pelham and similar soils: About 80 percent

Minor Components

- Bladen soils, which are in the slightly higher positions on stream terraces, are in a fine textural family, and do not have sandy surface and subsurface layers with a combined thickness of more than 20 inches
- Chastain and Tawcaw soils, which are in a fine textural family and are on flood plains adjacent to the Pelham soil
- Chipley soils, which are in the higher positions and are somewhat poorly drained

- Croatan soils, which are in depressions and have a thick, dark surface layer
- Grady soils, which are in depressions, are in a fine textural family, and do not have sandy surface and subsurface layers with a combined thickness of more than 20 inches
- Leefield soils, which are in the slightly higher positions, are somewhat poorly drained, and contain more than 5 percent plinthite within a depth of 60 inches
- Ocilla soils, which are in the slightly higher positions on stream terraces and are somewhat poorly drained
- Pickney soils, which are in positions similar to those of the Pelham soil, are sandy throughout, and have a thick, dark surface layer
- Rains soils, which are on flats along drainageways and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Rigdon soils, which are in the slightly higher positions and are somewhat poorly drained

Characteristics of the Pelham Soil

Setting
Landform: Depressions and drainageways
Slope: Nearly level
Parent material: Loamy alluvium

Typical profile
Surface layer:
0 to 6 inches—very dark gray loamy sand

Subsurface layer:
6 to 18 inches—grayish brown loamy sand that has yellowish brown and gray mottles
18 to 33 inches—light brownish gray loamy sand that has brownish yellow mottles

Subsoil:
33 to 41 inches—gray sandy loam that has brownish yellow mottles
41 to 66 inches—gray sandy clay loam that has strong brown, brownish yellow, and gray mottles

Substratum:
66 to 80 inches—light gray sandy loam that has brownish yellow mottles

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: B/D

PkA—Pickney mucky sand, 0 to 1 percent slopes, frequently flooded

Map Unit Composition

Pickney and similar soils: About 90 percent

Minor Components

- Bibb and Muckalee soils, which are in a coarse-loamy textural family and are on flood plains adjacent to the Pickney soil
- Chastain and Tawcaw soils, which are in a fine textural family and are on flood plains adjacent to the Pickney soil
- Croatan soils, which are in depressions and have a thick, dark surface layer
- Grady soils, which are in depressions, are in a fine textural family, and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Herod and Kinston soils, which are in a fine-loamy textural family and are on flood plains adjacent to the Pickney soil
- Pelham soils, which are in the smaller drainageways and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Surrency soils, which are in positions similar to those of the Pickney soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Characteristics of the Pickney Soil

Setting
Landform: Drainageways and depressions
Slope: Nearly level
Parent material: Sandy alluvium

Typical profile
Surface layer:
0 to 20 inches—black mucky sand
20 to 38 inches—very dark brown loamy fine sand

Underlying material:
38 to 50 inches—grayish brown loamy fine sand
50 to 65 inches—light brownish gray sand
65 to 80 inches—gray sand

Properties and qualities
Drainage class: Very poorly drained
Depth to water table: At the surface (apparent)
Flooding: Frequent
Ponding: Frequent
Permeability: Rapid
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 7w
Hydrologic group: A/D

RaA—Rains loamy sand, 0 to 2 percent slopes

Map Unit Composition

Rains and similar soils: About 80 percent

Minor Components

- Ocilla soils, which are in the higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are somewhat poorly drained
- Pelham soils, which are in drainageways and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

- Surrency soils, which are in drainageways, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are very poorly drained

Characteristics of the Rains Soil

Setting
Landform: Flats on marine terraces and flats on broad interstream divides
Slope: Nearly level
Parent material: Loamy marine deposits

Typical profile
Surface layer:
0 to 6 inches—very dark gray loamy sand

Subsurface layer:
6 to 18 inches—dark gray loamy sand that has gray mottles

Subsoil:
18 to 28 inches—grayish brown sandy loam that has yellowish brown mottles
28 to 50 inches—grayish brown sandy clay loam that has yellowish brown mottles
50 to 60 inches—light brownish gray sandy clay loam that has yellowish brown and strong brown mottles
60 to 70 inches—gray sandy clay loam that has yellowish brown and strong brown mottles
70 to 80 inches—gray sandy clay loam that has yellowish brown, dark yellowish brown, and strong brown mottles

Properties and qualities
Drainage class: Poorly drained
Depth to water table: At the surface to 1 foot (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: High
Depth class: Very deep

Interpretive groups
Land capability classification: 5w
Hydrologic group: B/D

RbF—Remlik-Blanton complex, 15 to 60 percent slopes

Map Unit Composition

Remlik and similar soils: About 55 percent
Blanton and similar soils: About 20 percent

Minor Components

- Chipley soils, which are in the lower positions, are sandy throughout, and are somewhat poorly drained
- Pelham soils, which are are in the lower positions and are poorly drained

Characteristics of the Remlik Soil

Setting
Landform: Escarpments
Slope: Moderately steep to very steep
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
8 to 30 inches—yellowish brown loamy sand

Subsoil:
30 to 57 inches—yellowish brown sandy clay loam
57 to 80 inches—yellowish brown sandy loam that has light brownish gray and strong brown mottles

Properties and qualities
Drainage class: Well drained
Depth to water table: Greater than 6 feet
Flooding: None
Ponding: None
Permeability: Slow
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 6e
Hydrologic group: B

Characteristics of the Blanton Soil

Setting
Landform: Broad interstream divides
Slope: Moderately steep and steep
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
8 to 42 inches—light olive brown sand
42 to 60 inches—pale yellow sand that has yellowish brown mottles
60 to 70 inches—pale yellow sand that has light brownish gray and strong brown mottles

Subsoil:
70 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has pale brown and strong brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Very low
Depth class: Very deep

Interpretive groups
Land capability classification: 6s
Hydrologic group: A

RgA—Rigdon sand, 0 to 2 percent slopes

Map Unit Composition

Rigdon and similar soils: About 80 percent

Minor Components

- Leefield soils, which are in the slightly higher positions and do not have a subsoil horizon that contains accumulations of organic matter and compounds of aluminum and iron
- Pelham soils, which are in the slightly lower positions and are poorly drained
- Stilson soils, which are in the higher positions, do not have a subsoil horizon that contains accumulations of organic matter and compounds of aluminum and iron, and are moderately well drained

Characteristics of the Rigdon Soil

Setting
Landform: Flats on marine terraces
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

Typical profile
Surface layer:
0 to 6 inches—black sand

Subsoil:
6 to 11 inches—dark brown sand

Subsurface layer:
11 to 20 inches—pale brown sand that has brownish yellow mottles
20 to 36 inches—pale brown sand that has brownish yellow and faint light gray mottles

Subsoil:
36 to 49 inches—light brownish gray sandy clay loam that has red and yellowish brown mottles
49 to 80 inches—light gray sandy clay loam that has dark red, strong brown, and yellowish brown mottles

Properties and qualities
Drainage class: Somewhat poorly drained
Depth to water table: About 1 1/2 to 2 1/2 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3w
Hydrologic group: B/D

StA—Stilson loamy sand, 0 to 2 percent slopes

Map Unit Composition

- Stilson and similar soils: About 85 percent

Minor Components

- Clarendon soils, which are in positions similar to those of the Stilson soil and do not have sandy surface and subsurface layers with a combined thickness of more than 20 inches
- Fuquay soils, which are in the slightly higher positions and are well drained
- Leefield and Ocilla soils, which are in the slightly lower positions and are somewhat poorly drained
- Meldrim soils, which are in positions similar to those of the Stilson soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Rigdon soils, which are in the slightly lower positions and are somewhat poorly drained

Characteristics of the Stilson Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

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

Subsoil:
26 to 35 inches—brownish yellow sandy loam that has strong brown mottles
35 to 48 inches—brownish yellow sandy clay loam that has strong brown and light gray mottles
48 to 61 inches—brownish yellow sandy clay loam that has strong brown and light gray mottles
61 to 77 inches—strong brown sandy clay loam that has yellowish brown and light gray mottles
77 to 80 inches—strong brown sandy clay loam that has yellowish brown and light gray mottles

Properties and qualities
Drainage class: Moderately well drained
Depth to water table: About 2 1/2 to 3 1/2 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 2w
Hydrologic group: B

SuA—Surrency mucky sand, 0 to 1 percent slopes, frequently flooded

Map Unit Composition

Surrency and similar soils: About 85 percent

Minor Components

- Chastain and Tawcaw soils, which are in a fine textural family and are in flood plains adjacent to the Surrency soil
- Croatan soils, which are in depressions and have a thicker, dark surface layer than that of the Surrency soil
- Grady soils, which are in depressions; are in a fine textural family; do not have a thick, dark surface layer; and do not have sandy surface and subsurface layers with a combined thickness of over 20 inches
- Pelham soils, which are in the slightly higher positions; do not have a thick, dark surface layer; and are poorly drained
- Pickney soils, which are in positions similar to those of the Surrency soil, are sandy throughout, and have a thicker, dark surface layer than that of the Surrency soil

Characteristics of the Surrency Soil

Setting
Landform: Depressions and drainageways
Slope: Nearly level
Parent material: Sandy marine deposits, loamy marine deposits, or both

Typical profile
Surface layer:
0 to 22 inches—black mucky sand

Subsoil:
22 to 35 inches—dark gray sandy loam
35 to 58 inches—dark gray sandy clay loam that has yellowish brown mottles
58 to 80 inches—dark gray sandy clay loam that has strong brown and yellowish brown mottles

Properties and qualities
Drainage class: Very poorly drained
Depth to water table: At the surface (apparent)
Flooding: Frequent
Ponding: Frequent
Permeability: Moderately slow
Available water capacity: Moderate
Depth class: Very deep

Interpretive groups
Land capability classification: 6w
Hydrologic group: D

UaB—Uchee sand, 0 to 5 percent slopes

Map Unit Composition

Uchee and similar soils: About 92 percent

Minor Components

- Blanton soils, which have are in positions similar to those of the Uchee soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Fuquay soils, which contain more than 5 percent plinthite within a depth of 20 to 60 inches and are in the smoother, less sloping positions adjacent to the Uchee soil
- Meldrim soils, which are in the slightly lower positions, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and are moderately well drained

Characteristics of the Uchee Soil

Setting
Landform: Broad interstream divides
Slope: Nearly level and very gently sloping
Parent material: Loamy marine deposits

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

Subsurface layer:
6 to 14 inches—yellowish brown sand
14 to 27 inches—brownish yellow sand
27 to 35 inches—brownish yellow loamy sand

Subsoil:
35 to 41 inches—brownish yellow sandy clay loam
41 to 53 inches—strong brown, light gray, yellowish red, and brownish yellow clay

Substratum:
53 to 80 inches—strong brown, light gray, yellowish red, and brownish yellow sandy clay loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 3 1/2 to 5 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 2s
Hydrologic group: A

UbC—Uchee-Blanton complex, 5 to 8 percent slopes

Map Unit Composition

Uchee and similar soils: About 85 percent
Blanton and similar soils: About 10 percent

Minor Components

- Fuquay soils, which contain more than 5 percent plinthite within a depth of 60 inches and are in the smoother, less sloping positions adjacent to the major soils
- Lakeland soils, which are in the slightly higher positions and are sandy throughout
- Meldrim soils, which are in the slightly lower positions and are moderately well drained

Characteristics of the Uchee Soil

Setting
Landform: Broad interstream divides
Slope: Gently sloping
Parent material: Loamy marine deposits

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

Subsurface layer:
6 to 14 inches—yellowish brown sand
14 to 27 inches—brownish yellow sand
27 to 35 inches—brownish yellow loamy sand

Subsoil:
35 to 41 inches—brownish yellow sandy clay loam
41 to 53 inches—strong brown, light gray, yellowish red, and brownish yellow clay

Substratum:
53 to 80 inches—strong brown, light gray, yellowish red, and brownish yellow sandy clay loam

Properties and qualities
Drainage class: Well drained
Depth to water table: About 3½ to 5 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderately slow
Available water capacity: Low
Depth class: Very deep

Interpretive groups
Land capability classification: 3s
Hydrologic group: A

Characteristics of the Blanton Soil

Setting
Landform: Broad interstream divides
Slope: Gently sloping
Parent material: Sandy marine deposits, loamy marine deposits, or both

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

Subsurface layer:
8 to 42 inches—light olive brown sand
42 to 60 inches—pale yellow sand that has yellowish brown mottles
60 to 70 inches—pale yellow sand that has light brownish gray and strong brown mottles

Subsoil:
70 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has pale brown and strong brown mottles

Properties and qualities
Drainage class: Somewhat excessively drained
Depth to water table: About 4 to 6 feet (apparent)
Flooding: None
Ponding: None
Permeability: Moderate
Available water capacity: Very low
Depth class: Very deep

Interpretive groups
Land capability classification: 4s
Hydrologic group: A

UrB—Udorthents, loamy, 0 to 6 percent slopes

Map Unit Composition

Udorthents and similar soils: About 100 percent

Characteristics of the Udorthents

- Udorthents are areas that have been disturbed by cutting, filling, or reshaping. Soil properties, such as texture, depth, permeability, and available water capacity, are highly variable.

W—Water

Map Unit Composition

Water and similar components: About 100 percent

- This component consists of areas of open water, such as lakes, ponds, rivers, and streams.

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, roadfill, and topsoil. They can use it to identify areas where wetness, or very firm soil layers can cause difficulty in excavation.

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

Interpretive Ratings

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

Rating Class Terms

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

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Pasture and Hayland

Dennis Chessman, grazing land specialist, prepared this section.

Most of the grasslands in the county are used for forage production. In addition to providing food for grazing animals, grasslands provide other beneficial ecosystem services. The fibrous structure of grass roots is effective at holding soil in place, reducing the potential for water erosion. The vegetation also functions to intercept raindrops that would otherwise impact the soil surface, dislodging particles and deteriorating soil structure. Soils that support a permanent grass cover have been shown to sequester as much as 2,000 pounds of carbon per acre per year, making grasslands an excellent sink for excess atmospheric carbon dioxide. Warm-season perennial grasses are the primary forages in the county.

Most of the pastures and hay fields in the county are planted to bermudagrass or bahiagrass, which are both introduced species. Common bermudagrass, as well as several improved varieties, can be seeded. However, coastal bermudagrass and other hybrids do not produce enough viable seed for reproduction and therefore must be established vegetatively. Bermudagrass can provide excellent grazing and hay. Bahiagrass is typically used for pasture. The newer, high-yielding varieties also have the potential to be a productive hay crop. Bahiagrass is slightly less drought-tolerant than bermudagrass, especially on deep, sandy soils. Bahiagrass is, however, highly tolerant of saturated soils, whereas most bermudagrass varieties are not adapted to poorly drained conditions. Native warm-season grasses, such as switchgrass, eastern gamagrass, Indiangrass, and little bluestem, are adapted to conditions in the county and able to provide high-quality spring grazing. These species are not, however, widely used for forage production. Unlike the introduced forage grasses, which are relatively tolerant of continuous grazing, the native species require rotational stocking and rigorously maintained minimum grazing heights to prevent stand loss. Also, the native species do not produce as much hay as bermudagrass.

Competition from weeds can be a problem in fields where undesirable plants have become established due to thinning of the stand or death of the forage. Management- and environment-related factors that can contribute to poor forage growth and favorable conditions for weed establishment include decreased soil fertility, low soil pH, improper grazing or harvesting, and extended drought. Except for drought, these factors are under the manager’s control. Use of a selective herbicide may be necessary if undesirable plants become established and reach threshold population levels.

Soils in the county are highly weathered and naturally acidic. Periodic soil testing and the application of fertilizer and lime on the basis of lab recommendations and yield goals can help to ensure vigorous forage growth. The efficiency of fertilizer can be improved by applying limestone to soils that have pH of less than 6.0. When other environmental conditions for growth are favorable, yields of bahiagrass and bermudagrass can be increased significantly by application of nitrogen fertilizer. Hybrid bermudagrass varieties in particular are highly responsive to application of fertilizer. The yield potential is at least 8 to 10 tons per acre if nitrogen is supplied throughout the growing season and soil moisture is not limiting. Low levels of potassium in the soil can result in increased susceptibility of bermudagrass to environmental stress, such as cold, drought, and over-grazing. This stress can lead to stand decline or loss, especially if improved varieties are managed for maximum hay yield.

Proper management of forage harvest includes maintaining a minimum after-harvest height and allowing adequate time for re-growth before the plants are mowed or grazed again. Also, excessive stocking rates, which can result in plants being grazed too close to the ground, should be prevented. Bermudagrass and bahiagrass should not be harvested to a height of less than 2 inches. Although they are relatively tolerant of the low and frequent grazing that is typically associated with continuous stocking, they perform better if stocking density is adjusted or pasture rest periods are provided as forage growth changes throughout the growing season. Native grasses are much less tolerant of low and frequent harvesting. Generally, they should not be grazed to a height of less than 6 to 8 inches, depending on species. They also require a longer recovery time after grazing than is required by the nonnative species. Rotational stocking with several paddocks is essential to maintain a vigorous, long-term pasture of native warm-season grasses. The time necessary for re-growth of any species depends primarily on soil moisture and fertility, temperature, and harvest height.

An important but underutilized practice in the southeastern U.S. is the establishment of winter pasture by over-seeding dormant, warm-season perennial grass with cool-season annuals in the fall. The relatively long growing season of the area in combination with proper planning can typically provide grazing for nearly the entire year. Benefits of winter pasture include decreased expenses associated with hay and increased forage nutritive value compared to warm-season grasses. Common winter-pasture species include rye, oats, wheat, annual ryegrass, and annual clovers, such as crimson clover and arrowleaf clover. Livestock producers should give serious consideration to including clovers or other legumes in their forage system. Legumes typically have a high content of crude protein and improve the overall nutritive value of the winter pasture. Bacteria living in association with legume roots provide nitrogen for the plants, thus reducing or eliminating the need for nitrogen fertilizer. Alfalfa is a perennial legume that provides excellent forage. Alfalfa can be grown in the county where the pH of the surface layer of the soil can be maintained close to 7.0, the pH of the subsoil to a depth of about 4 feet is 5.5 or above, and the location is well drained. Although the nutritive value of alfalfa can be excellent, it is adapted to fewer sites and requires more management than other forages commonly grown on the Coastal Plain and Atlantic Coast Flatwoods.

Crops and Pasture

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

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

Yields per Acre

The average yields per acre shown in table 5 are those that can be expected of the principal crops under a high level of management. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the 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 and green manure crops; and harvesting that ensures the smallest possible loss.

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

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

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

Land Capability Classification

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

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

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

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

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

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

Prime Farmland and Farmland of Statewide Importance

Table 6 lists the map units in the survey area that are considered prime farmland or farmland of statewide importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

In some areas, land that does not meet the criteria for prime farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according

to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

Hydric Soils

This section lists the map units that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999), “Keys to Soil Taxonomy” (Soil Survey Staff, 2006), and the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

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

The following map units 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, 2002).

BdA Bladen fine sandy loam, 0 to 2 percent slopes, occasionally flooded
CAA Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded
GCA Grady and Croatan soils, 0 to 2 percent slopes, ponded
HMA Herod and Muckalee loams, 0 to 2 percent slopes, frequently flooded
KBA Kinston and Bibb soils, 0 to 2 percent slopes, frequently flooded
PeA Pelham loamy sand, 0 to 2 percent slopes
PkA Pickney mucky sand, 0 to 1 percent slopes, frequently flooded
RaA Rains loamy sand, 0 to 2 percent slopes
SuA Surrency mucky sand, 0 to 1 percent slopes, frequently flooded

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.

ChA Chipley sand, 0 to 2 percent slopes
EuA Eulonia sandy loam, 0 to 2 percent slopes
LeA Leefield loamy sand, 0 to 2 percent slopes
OcA Ocilla loamy sand, 0 to 2 percent slopes
RgA Rigdon sand, 0 to 2 percent slopes

Forestland Productivity and Management

Michael Sampson, state forester, USDA Natural Resource Conservation Service, prepared this section.

Owners of forestland in Screven County have many objectives. These objectives include producing timber; conserving wildlife, soil, and water; preserving aesthetic value; and providing opportunities for recreational activities, such as commercial hunting. Public demand for clean water and recreational areas creates pressures and opportunities for owners of forestland.

Screven County is still a traditionally agricultural county producing fruits, nuts, ornamental horticulture, row crops, and forage crops. The forestland in Screven County covers over 332,422 acres, or about 78 percent of the land in the county. For purposes of forest inventory, the predominant forest types identified in Screven County are loblolly pine, shortleaf pine, slash pine, longleaf pine, southern red oak, blackjack oak, post oak, bluejack oak, various hickory, white oak, bald cypress, blackgum, sweetgum, water oak, tupelo oak, elm, and American sycamore.

Stands of the natural longleaf/slash pine forest group cover 20,944 acres. Stands of longleaf/slash pine forest that have been artificially regenerated cover 7,587 acres. The combined area of the natural and regenerated longleaf/slash pine stands is 28,531 acres, which is about 9 percent of total forested acres in the county. Stands of the natural loblolly/shortleaf pine group cover 25,736 acres. Stands that have been artificially regenerated with the loblolly/shortleaf pine group cover 108,940 acres. The combined area of the natural and regenerated loblolly/shortleaf pine stands is 134,677 acres, which is about 41 percent of the total forested acres. Stands of the natural oak/pine group cover 20,641 acres. Stands that have been artificially regenerated cover 11,972 acres. The combined area of the natural and regenerated oak/pine stands is 32,614 acres, which is about 10 percent of the total forested acres. Stands of the natural oak/hickory group cover 28,334 acres. Stands that have been artificially regenerated cover 1,506 acres. The combined area of the natural and regenerated oak/hickory group is 29,841 acres, which is about 9 percent of the total forested acres. Stands of the natural oak/gum/cypress group cover 96,314 acres, which is about 29 percent of the total forested acres. Stands of the natural Elm/ash/cottonwood group cover 10,446 acres, which is about 3 percent of the total forested acres.

Loblolly pine and shortleaf pine are the most extensive timber species in the county because they grow fast, are adapted to the soils and climate, bring the highest

average sale value per acre, and are relatively easy to establish and manage. With proper site preparation, slash pine and longleaf pines could also easily be grown across the county on appropriate soils.

Much of the existing commercial forest could be improved by weeding out undesirable species. Continued protection from grazing and fire and control of diseases and insects are also needed to improve stands. The level of forest management has improved significantly during recent years. Uncontrolled burning, which was generally practiced in the area about two decades ago, has given way to fire protection, prescribed burning, or both. Additional forest management practices include use of genetically improved seedlings, natural regeneration, herbaceous weed control, and applications of fertilizer.

Soils vary in their ability to produce trees. Depth, fertility, texture, and available water capacity influence tree growth. Elevation, aspect, and climate determine the kinds of trees that can grow on a site. Available water capacity and the depth of the root zone are major influences of tree growth. Elevation and aspect are of particular importance in mountainous areas.

This soil survey can be used by managers planning ways to increase the productivity of forestland. Some soils respond better to applications of fertilizer than others, and some are more susceptible to erosion after roads are built and timber is harvested.

The potential productivity of merchantable or common trees on a soil is expressed as site index. Site index is a measure of the productivity of a site as indicated by the height of dominant trees of a given species in the stand at an arbitrarily chosen age (both 25 and 50 years are used in the South). 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 the 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 Resource Conservation Service or on the Internet.

The landowner interested in timber production is faced with the challenge of producing greater yields from smaller areas. Meeting this challenge requires intensive management and silvicultural practices. Many modern silvicultural techniques resemble those long practiced in agriculture. They include establishing, weeding, and thinning a desirable young stand; propagating appropriate genetics varieties; providing short rotations and complete fiber utilization; controlling insects, diseases, and weeds; and improving tree growth by applying fertilizer. Even though timber crops require time to grow, the goal of intensive management is similar to the goal of intensive agriculture. This goal is to produce the greatest yield of the most valuable crop as quickly as possible.

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

In table 7, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

In tables 8a, 8b, and 8c, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

Table 8a

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Table 8b

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.

Table 8c

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Recreational Development

In the tables 9a and 9b, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Table 9a

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 bedrock or 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 bedrock or a cemented pan, permeability, and toxic substances in the soil.

Table 9b

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 bedrock or 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.

Wildlife

Wildlife is an important natural resource in Screven County. White-tailed deer, squirrel, wild turkey, rabbit, raccoon, and gray fox are common in most parts of the county. Bobwhite quail, numerous small mammals, and many types of songbirds inhabit farm areas where early successional habitat is readily available. Streams, ponds, and lakes support excellent populations of largemouth bass, catfish, chain pickerel, warmouth perch, and bluegill bream as well as American alligators. Wetlands provide resting and feeding areas for migratory waterfowl in fall and spring and provide breeding habitat for frogs and amphibians.

Wildlife populations are the product of available habitat. The habitat must furnish an animal species with food, cover, water, and space in order for the species to maintain a viable population.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. 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 or manipulating the existing plant cover, or by promoting the natural establishment of desirable plants.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, 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, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

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 10a and 10b, show the degree and kind of soil limitations that affect dwellings with and without basements, local roads and streets, and shallow excavations.

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).

Table 10a

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Table 10b

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Sanitary Facilities

Table 11 shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

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, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, 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 fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Construction Materials

Table 12 gives information about the soils as potential sources of sand, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand is a natural aggregate suitable for commercial use with a minimum of processing. It is used in many kinds of construction. Specifications for each use vary widely. In the table 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 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, the soil is considered a likely source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand. 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. 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 rating class terms are *good, fair,* and *poor* for sources of roadfill and topsoil. 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 roadfill and topsoil. The lower the number, the greater the limitation.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 13 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 and for embankments, dikes, and levees. The ratings are both verbal and

numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 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 boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Soil Properties

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

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

Engineering Properties

Table 14 gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement,

the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical and Chemical Properties of the Soils

Table 15 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.

Clay as a soil separate consist of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The 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 linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, 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.

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.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and 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.

Water Features

Table 16 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. The table indicates, by month, depth to the top (*upper limit*) of the saturated zone in most years. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

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. Examples are bedrock, cemented layers, and dense layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2006). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 18 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. An example is Aquic 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, mixed, subactive, thermic Aquic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The soils of the Eulonia series are fine, mixed, subactive, thermic Aquic Hapludults.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993) and in the “Field Book for Describing and Sampling Soils” (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2006). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Albany Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Aquic Arenic Paleudults

Geographically Associated Soils

- Blanton soils, which are well drained and are in the higher positions
- Chipley soils, which are sandy throughout and are in the lower positions
- Leefield soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are in positions similar to those of the Albany soils
- Meldrim soils, which are moderately well drained and are in the slightly higher positions
- Ocilla soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are in positions similar to those of the Albany soils

Typical Pedon

Albany loamy sand, 0 to 2 percent slopes; about 2.3 miles north on Midland Road from the intersection of Midland Road and Georgia Highway 30, about 600 feet east of the road; Effingham County, Georgia; Meldrim, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 13 minutes 31 seconds N. and long. 81 degrees 19 minutes 4 seconds W.

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many fine and common medium roots; very strongly acid; abrupt smooth boundary.

E1—10 to 25 inches; pale brown (10YR 6/3) loamy sand; weak fine granular structure; very friable; few fine roots; few fine faint yellowish brown (10YR 5/4) masses of oxidized iron; very strongly acid; clear smooth boundary.

E2—25 to 47 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; common medium faint brown (7.5YR 5/4) masses of oxidized iron; few fine distinct light gray (10YR 7/2) iron depletions; very strongly acid; clear smooth boundary.

Btg1—47 to 60 inches; gray (10YR 6/1) sandy loam; weak medium subangular blocky structure; friable; many clay bridges between sand grains; common coarse prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; few lenses of light gray sand; gradual wavy boundary.

Btg2—60 to 80 inches; 50 percent light gray (10YR 7/1), 30 percent red (2.5YR 4/8), and 20 percent strong brown (7.5YR 5/8) sandy clay loam; moderate medium

subangular blocky structure; friable; few faint clay films on surfaces along pores and few faint clay bridges between sand grains; 2 percent plinthite nodules; very strongly acid; few fine lenses of light gray sand.

Range in Characteristics

Thickness of the solum: 70 to more than 80 inches
Reaction: Extremely acid to moderately acid
Plinthite: Less than 5 percent to a depth of 60 inches; 0 to 10 percent between depths of 60 and 80 inches

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

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand
Redoximorphic features—common masses of oxidized iron in shades of brown and common or many iron depletions in shades of gray

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

Bt horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of brown and common or many iron depletions in shades of gray

Btv horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of brown and common or many iron depletions in shades of gray

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 or 2; or variegated in shades of red, brown, and gray
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades brown

Bibb Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Loamy alluvium
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

Geographically Associated Soils

- Kinston soils, which are in a fine-loamy textural family and are in positions similar to those of the Bibb soils
- Herod and Muckalee soils, which are nonacid and are in positions similar to those of the Bibb soils
- Ocilla soils, which are somewhat poorly drained and are on stream terraces adjacent to the Bibb soils
- Pelham soils, which are in drainageways adjacent to the Bibb soils and are in the loamy textural family
- Rains soils, which are in a fine-loamy textural family and are in the slightly higher positions

Typical Pedon

Bibb sandy loam in an area of Osier and Bibb soils, 0 to 2 percent slopes, frequently flooded; about 0.6 mile west of the headquarters of the Southeast Georgia Branch Experiment Station, near the western boundary; Burke County, Georgia; Midville, Georgia, 7.5 minute topographic quadrangle; lat. 32 degrees 53 minutes 0 seconds N. and long. 82 degrees 12 minutes 13 seconds W.

A—0 to 8 inches; very dark grayish brown (10YR 3/2) sandy loam; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear wavy boundary.

Ag—8 to 14 inches; light gray (10YR 7/2) loamy sand; single grain; loose; few fine and few very fine roots; strongly acid; abrupt irregular boundary.

Cg1—14 to 21 inches; light brownish gray (10YR 6/2) sandy loam; massive; friable; few fine roots; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; clear wavy boundary.

Cg2—21 to 55 inches; gray (10YR 6/1) sandy loam; massive; friable; few fine and few medium roots; few distinct clay films; common medium distinct yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 4/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Cg3—55 to 80 inches; 60 percent gray (10YR 6/1), 20 percent red (2.5YR 5/8), and 20 percent yellowish brown (10YR 5/6) sandy loam; massive; friable; few fine roots; very strongly acid.

Range in Characteristics

Reaction: Very strongly acid or strongly acid throughout

Rock fragments: 0 to 10 percent throughout; but may range up to 35 percent in thin strata below a depth of 40 inches

Other: Buried soil horizons, which have the same range in color and texture as the Ag horizon, are in many pedons.

A or Ap horizon:

Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2

Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam

Ag horizon (present in most pedons):

Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam

Redoximorphic features—few or common masses of oxidized iron in shades of brown and yellow

Cg horizon:

Color—hue of 10YR to 5BG, value of 4 to 7, and chroma of 1 or 2

Texture—loamy fine sand, sandy loam, fine sandy loam, or loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

Bladen Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Stream terraces
Parent material: Clayey fluviomarine deposits
Drainage class: Poorly drained
Permeability class: Slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine, mixed, semiactive, thermic Typic Albaquults

Geographically Associated Soils

- Chastain soils, which are on flood plains and do not have well developed clayey horizons
- Eulonia soils, which are in the higher positions on stream terraces and are moderately well drained
- Ocilla soils, which are in the slightly higher positions on stream terrace, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Pelham soils, which are in the lower positions, are loamy, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Surrency soils, which are on flood plains, are very poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Tawcaw soils, which are on flood plains and are somewhat poorly drained

Typical Pedon

Bladen fine sandy loam, 0 to 2 percent slopes, occasionally flooded; 2 miles north of Townsend, 0.3 mile west of Huxford, across Seaboard Coastline Railroad, 500 yards north on Tram Road, and on the east side of the road; McIntosh County, Georgia; Townsend, Georgia, 7.5-minute topographic quadrangle; lat. 31 degrees 34 minutes 0 seconds N. and long. 81 degrees 30 minutes 53 seconds W.

A—0 to 7 inches; black (10YR 2/1) fine sandy loam; weak fine granular structure; very friable; many fine roots; very strongly acid; clear smooth boundary.
E1—7 to 9 inches; light brownish gray (2.5Y 6/2) fine sandy loam; weak fine granular structure parting to weak fine subangular blocky; friable; common fine roots; common medium prominent brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid; clear wavy boundary.
E2—9 to 14 inches; grayish brown (2.5Y 5/2) fine sandy loam; weak fine granular structure parting to weak fine and medium subangular blocky; friable; few fine roots; many coarse prominent yellowish brown (10YR 5/6) masses of oxidized iron; many coarse faint light brownish gray (2.5Y 6/2) iron depletions; strongly acid; abrupt smooth boundary.
Btg1—14 to 30 inches; gray (N 5/0) clay; moderate medium subangular blocky structure; very firm; common faint clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) and few fine prominent dark red (10R 3/6) masses of oxidized iron; strongly acid; gradual smooth boundary.
Btg2—30 to 41 inches; gray (N 5/0) clay; moderate medium subangular blocky structure; very firm; common distinct clay films on all faces of peds; many medium prominent yellowish brown (10YR 5/6) and few medium prominent

dark red (10R 3/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Btg3—41 to 80 inches; dark gray (5Y 4/1) clay; moderate medium subangular blocky structure; very firm; few faint clay films on all faces of peds; many coarse prominent strong brown (7.5YR 5/8) and common fine prominent red (2.5YR 4/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Rock fragments: 0 to 5 percent (rounded quartz)
Reaction: Extremely acid to strongly acid throughout, except where limed

A horizon:
- Color—hue of 10YR, 2.5Y, or 5Y; value of 2 to 5; and chroma of 1 or 2; or neutral in hue and value of 2 to 5
- Texture—sandy loam or fine sandy loam

E horizon:
- Color—hue of 10YR, 2.5Y, or 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 or fine sandy loam
- Redoximorphic features—few or common masses of oxidized iron in shades of red, yellow, or brown and few or common iron depletions in shades of brown, yellow, olive, or gray

BE horizon (where present):
- Color—hue of 10YR, 2.5Y, or 5Y; value of 4 to 6; and chroma of 1 or 2; or neutral in hue and value of 4 to 7
- Texture—sandy loam or sandy clay loam
- Redoximorphic features (where present)—few or common masses of oxidized iron in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, olive, or gray

Btg horizon:
- Color—hue of 10YR, 2.5Y, or 5Y; 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 clay loam; common thin lenses, tongues, and pockets of sandy loam or loamy sand
- Redoximorphic features—masses of oxidized iron in shades of red, yellow, or brown
- Other characteristics—in the upper 20 inches of the horizon, the average clay content ranges from 35 to 55 percent and the silt content is less than 30 percent.

BCg horizon (where present):
- Color—hue of 10YR, 2.5Y, or 5Y; 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, sandy clay loam, or clay loam; common thin lenses, tongues, and pockets of sandy loam or loamy sand
- Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown

Cg horizon (where present):
- Color—hue of 10YR, 2.5Y, or 5Y; value of 4 to 7; and chroma of 1 or 2; or neutral in hue and value of 4 to 7
- Texture—variable or stratified with sandy to clayey materials
- Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown

Blanton Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits, loamy marine deposits, or both (fig. 7)
Drainage class: Somewhat excessively drained
Permeability class: Moderate
Depth class: Very deep

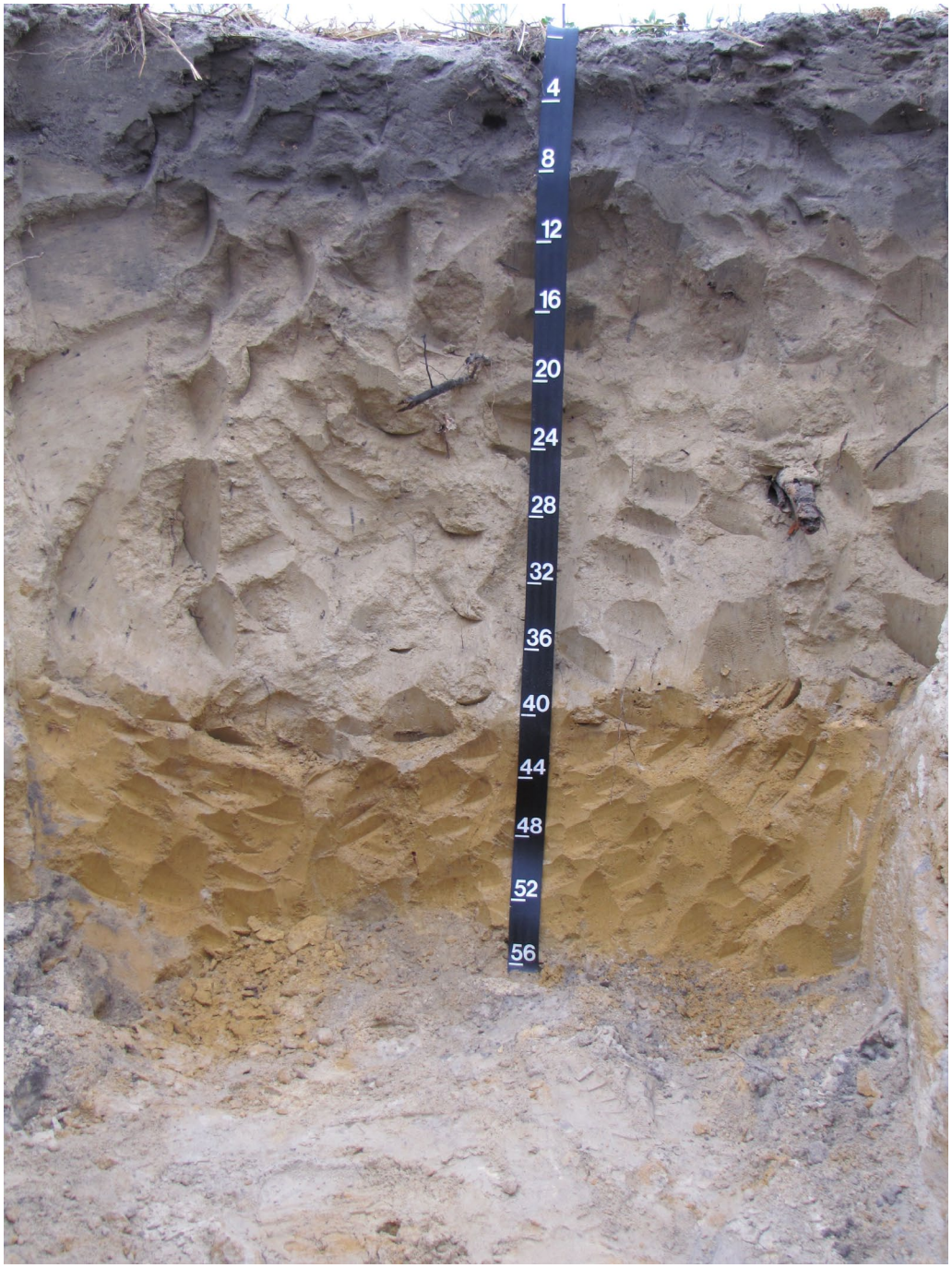

Figure 7.—Typical profile of Blanton sand.

Slope: 0 to 45 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Grossarenic Paleudults

Geographically Associated Soils

- Albany soils, which are in the lower positions and are somewhat poorly drained
- Foxworth soils, which are sandy throughout and are in positions similar to those of the Blanton soils
- Fuquay soils, which are in positions similar to those of the Blanton soils, contain more than 5 percent plinthite within a depth of 60 inches, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Meldrim soils, which are in the slightly lower positions and are moderately well drained
- Remlik soils, which are on slope breaks adjacent to the Blanton soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are well drained
- Uchee soils, which are in positions similar to those of the Blanton soils, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Blanton sand, 0 to 5 percent slopes; about 0.5 mile south on Laurel Street from its intersection with Georgia Highway 119, about 9.4 miles east on Stillwell-Clyo Road, 2.2 miles north on Laurel Tree Road, and 250 feet east of the road; Effingham County, Georgia; Hardeeville NW, South Carolina-Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 28 minutes 39 seconds N. and long. 81 degrees 13 minutes 3 seconds W.

A—0 to 8 inches; brown (10YR 4/3) sand; weak fine granular structure; very friable; many fine and common medium roots; moderately acid; clear wavy boundary.
E1—8 to 42 inches; light olive brown (2.5Y 5/4) sand; single grain; loose; common fine and few medium roots; moderately acid; gradual wavy boundary.
E2—42 to 60 inches; pale yellow (2.5Y 7/3) sand; single grain; loose; few fine roots; few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; many medium faint very pale brown (10YR 8/2) streaks of clean sand grains; moderately acid; gradual wavy boundary.
E3—60 to 70 inches; pale yellow (2.5Y 7/3) sand; single grain; loose; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common medium faint light brownish gray (10YR 6/2) iron depletions; many very pale brown (10YR 8/2) uncoated sand grains; strongly acid; dual wavy boundary.
Bt1—70 to 75 inches; strong brown (7.5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; clay bridges between sand grains; few fine distinct brownish yellow (10YR 6/8) masses of oxidized iron; strongly acid; gradual wavy boundary.
Bt2—75 to 80 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; many medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; common medium prominent pale brown (10YR 6/3) iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Thickness of the sandy epipedon: 46 to 75 inches
Plinthite: Less than 5 percent to a depth of 60 inches; 0 to 10 percent between depths of 60 and 80 inches
Reaction: Very strongly acid to moderately acid

A or Ap horizon:
Color—hue of 10YR or 2.5YR, value of 3 to 7, and chroma of 1 to 4
Texture—sand, fine sand, coarse sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 1 to 8
Texture—sand, fine sand, coarse sand, loamy sand, or loamy fine sand
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow and few or common iron depletions in shades of gray

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, loamy coarse sand, loamy fine sand, or sandy loam
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow and few or common iron depletions in shades of gray

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—few or common masses of oxidized iron in shades of brown and few or common iron depletions in shades of gray

Btv horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow and few or common iron depletions in shades of gray

Btg horizon (where present):
Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or sandy clay loam; ranging to sandy clay loam below a depth of 60 inches
Redoximorphic features—few to many masses of oxidized iron in shades of brown

Chastain Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flood plains
Parent material: Silty and clayey alluvium
Drainage class: Poorly drained
Permeability class: Slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts

Geographically Associated Soils

- Bladen soils, which are on low stream terraces
- Eulonia soils, which are on stream terraces and are moderately well drained
- Tawcaw soils, which are in the slightly higher positions in the flood plain and are somewhat poorly drained

Typical Pedon

Chastain loam in an area of Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded; about 2.9 miles southeast from Oliver, Georgia, on Louisville Road,

1.7 miles west on unimproved road, and 50 feet north of the road; Effingham County, Georgia; Leefield, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 28 minutes 39 seconds N. and long. 81 degrees 32 minutes 8 seconds W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; very friable; many fine and many medium roots; very strongly acid; clear smooth boundary.

Bg1—4 to 25 inches; grayish brown (10YR 5/2) clay; moderate medium angular blocky structure; firm; few fine and few medium roots; common fine prominent yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Bg2—25 to 36 inches; grayish brown (10YR 5/2) clay; moderate medium angular blocky structure; firm; few medium roots; many fine prominent strong brown (7.5YR 5/8) and many fine prominent yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Cg1—36 to 51 inches; grayish brown (10YR 5/2) sandy clay loam; weak medium subangular blocky structure; friable; few medium roots; common fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Cg2—51 to 58 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; few medium roots; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

2Cg3—58 to 80 inches; light brownish gray (10YR 6/2) sand; single grain; loose; common fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; strongly acid.

Range in Characteristics

Thickness of the solum: 25 to more than 60 inches

Reaction: Extremely acid to moderately acid; not moderately acid within a depth of 40 inches

A horizon:

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 1 to 4

Texture—loam, silt loam, silty clay loam, silty clay, clay loam, or clay

Redoximorphic features (where present)—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of brown, yellow, olive, or gray

Bg horizon:

Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

Texture—silty clay loam, clay loam, silty clay, or clay

Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of brown, yellow, olive, or gray

Cg horizon:

Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

Texture—sandy clay loam and silty clay loam

Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of brown, yellow, olive, or gray

2Cg horizon:

Color—hue of 10YR, value of 4 to 7, and chroma of 1 or 2

Texture—variable; ranging from sandy to clayey material

Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of brown, yellow, olive, or gray

Chipley Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flats on marine terraces
Parent material: Sandy marine deposits
Drainage class: Somewhat poorly drained
Permeability class: Rapid
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Thermic, coated Aquic Quartzipsamments

Geographically Associated Soils

- Albany soils, which are in positions similar to those of the Chipley soils and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Foxworth soils, which are in the higher positions and are moderately well drained to somewhat excessively drained
- Leefield soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Meldrim soils, which are in the higher positions, are moderately well drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Lakeland soils, which are in the higher positions and are excessively drained
- Pickney soils, which are in drainageways, are very poorly drained, and have a thick, dark surface layer

Typical Pedon

Chipley sand, 0 to 2 percent slopes; 5.9 miles south of Guyton on Georgia Highway 17 from its intersection with Georgia Highway 119, about 0.15 mile northeast on Courthouse Road, and 150 feet east of the road; Effingham County, Georgia; Springfield South, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 15 minutes 0 seconds N. and long. 81 degrees 22 minutes 30 seconds W.

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) sand; single grain; loose; many fine roots; moderately acid; clear smooth boundary.
C1—8 to 20 inches; brownish yellow (10YR 6/6) sand; single grain; loose; many fine roots; strongly acid; clear wavy boundary.
C2—20 to 28 inches; brownish yellow (10YR 6/6) sand; single grain; loose; few fine roots; common medium faint strong brown (7.5YR 5/6) masses of oxidized iron; common medium prominent light gray (10YR 7/1) iron depletions; strongly acid; gradual wavy boundary.
C3—28 to 35 inches; brownish yellow (10YR 6/6) sand; single grain; loose; few fine roots; strongly acid; common uncoated white (10YR 8/1) sand grains; gradual wavy boundary.
C4—35 to 59 inches; yellow (10YR 7/6) sand; single grain; loose; few fine roots; common medium distinct strong brown (7.5YR 5/6) masses of oxidized iron; common medium prominent light gray (10YR 7/1) iron depletions; strongly acid; common uncoated sand grains; gradual wavy boundary.
Cg1—59 to 66 inches; light gray (10YR 7/1) sand; single grain; loose; few fine roots; common medium distinct pale brown (10YR 6/3) and common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron; strongly acid; gradual wavy boundary.

Cg2—66 to 80 inches; light gray (10YR 7/2) sand; single grain; loose; common medium faint pale brown (10YR 6/3), common medium prominent light reddish brown (2.5YR 6/4), and common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; strongly acid.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Extremely acid to moderately acid in the A horizon; very strongly acid to slightly acid in the C horizon

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

C horizon:
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 8
Texture—sand or fine sand
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow and few or common iron depletions in shades of gray

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 or 2
Texture—sand or fine sand
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow

Clarendon Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flats on marine terraces and flats broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Moderately well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults

Geographically Associated Soils

- Dothan and Norfolk soils, which are in the slightly higher positions and are well drained
- Fuquay soils, which are in the higher positions, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Leefield soils, which are in the slightly lower positions, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Ocilla soils, which are on stream terraces adjacent to the Clarendon soils, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Rains soils, which are in the lower positions and are poorly drained
- Stilson soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Clarendon loamy sand, 0 to 2 percent slopes; about 0.1 mile west from the intersection of Georgia Highway 24 and Georgia Highway 17, about 4.8 miles south

from intersection of Georgia Highway 24 and Old Louisville Road, 0.9 mile east on an improved road through woods, and 50 feet west of the road; Effingham County, Georgia; Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 27 minutes 22 seconds N. and long. 81 degrees 30 minutes 9 seconds W.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many fine and common medium roots; moderately acid; clear smooth boundary.

E—6 to 16 inches; light yellowish brown (2.5Y 6/4) loamy sand; weak fine granular structure; very friable; common fine roots; moderately acid; clear smooth boundary.

Bt1—16 to 21 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak fine subangular blocky structure; friable; few fine roots; strongly acid; clear smooth boundary.

Bt2—21 to 26 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; few faint clay films on all faces of peds; common medium distinct yellowish brown (10YR 5/6) and few medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; common medium faint pale brown (10YR 6/3) iron depletions; strongly acid; clear smooth boundary.

Bt3—26 to 38 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on all faces of peds; few medium faint strong brown (7.5YR 5/6) masses of oxidized iron; common medium distinct pale brown (10YR 6/3), common medium faint yellowish brown (10YR 5/6), and common medium prominent light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

Btgv1—38 to 52 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few distinct clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) and few medium prominent red (2.5YR 4/8) masses of oxidized iron; common medium faint pale brown (10YR 6/3) iron depletions; 10 percent plinthite nodules; strongly acid; gradual wavy boundary.

Btgv2—52 to 62 inches; light gray (10YR 7/1) sandy clay loam; moderate medium subangular blocky structure; friable; few distinct clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) and few medium prominent red (2.5YR 4/8) masses of oxidized iron; 8 percent plinthite nodules; strongly acid; gradual wavy boundary.

BCg—62 to 80 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; common coarse prominent yellowish brown (10YR 5/6) and common coarse prominent red (2.5YR 4/8) masses of oxidized iron; strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches

Plinthite: 5 to 15 percent between depths of 21 and 60 inches

Rock fragments: 0 to 5 percent, by volume, ironstone nodules in the A and E horizons and in the upper part of the Bt horizon

Reaction: Very strongly acid to slightly acid throughout, except where limed

A or Ap horizon:

Color—hue of 10YR, value of 3 to 6, and chroma of 1 or 2

Texture—loamy sand

E horizon:

Color—hue of 2.5Y or 10YR, value of 5 to 7, and chroma of 2 to 4

Texture—loamy sand

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and common iron depletions in shades of gray

Btv horizon (where present):
Color—hue of 10YR, value of 5 to 7, and chroma of 3 to 6
Texture—sandy clay loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and common or many iron depletions in shades of gray

Btgv horizon:
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

BCg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

Cowarts Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Well drained
Permeability class: Slow
Depth class: Very deep
Slope: 2 to 12 percent
Taxonomic classification: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Geographically Associated Soils

- Dothan soils, which are in the smoother, less sloping positions and contain more than 5 percent plinthite within a depth of 60 inches
- Fuquay soils, which are in the smoother, less sloping positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Gritney soils, which are moderately well drained, have a clayey subsoil, and are in the slightly lower, dissected positions
- Nankin soils, which have a clayey subsoil, have a solum that is 40 to 60 inches thick, and are in positions similar to those of the Cowarts soils
- Remlik soils, which are on escarpments and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Uchee soils, which are in positions similar to those of the Cowarts soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Cowarts loamy sand, 2 to 12 percent slopes; about 4.5 miles south on Highway 301 from its intersection with Highway 21 bypass, in a road cut on the east side of the road; Screven County, Georgia; Sylvania South, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 39 minutes 60 seconds N. and long. 81 degrees 41 minutes 5 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; friable; many fine roots; moderately acid; clear smooth boundary.
Bt1—8 to 14 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; many fine roots; moderately acid; gradual wavy boundary.
Bt2—14 to 24 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine roots; strongly acid; gradual wavy boundary.
Bt3—24 to 30 inches; strong brown (7.5YR 5/8) sandy clay loam; strong medium subangular blocky structure; firm; many fine roots; many medium distinct red (2.5YR 4/8) and few medium prominent brownish yellow (10YR 6/8) masses of oxidized iron; few fine prominent pale brown (10YR 6/3) iron depletions; strongly acid; gradual wavy boundary.
BC—30 to 38 inches; 40 percent red (2.5YR 5/8), 40 percent strong brown (7.5YR 5/8), and 20 percent light gray (10YR 7/2) sandy loam; weak medium subangular blocky structure; friable; strongly acid; gradual wavy boundary.
C1—38 to 60 inches; 40 percent red (2.5YR 4/6), 30 percent strong brown (7.5YR 5/8), and 30 percent light gray (10YR 7/2) coarse sandy loam; massive; firm; strongly acid; gradual wavy boundary.
C2—60 to 80 inches; 40 percent light gray (10YR 7/2), 30 percent red (2.5YR 4/6), and 30 percent strong brown (7.5YR 5/8) loamy sand; massive; loose; many fine roots; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Nodular plinthite: 0 to 4 percent in the Bt horizon
Nodular ironstone: 0 to 10 percent in the A horizon and the upper part of the Bt horizon
Reaction: Very strongly acid or strongly acid throughout, except where limed

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—loamy sand, sandy loam, fine sandy loam, or the gravelly analogs of these textures

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 6
Texture—loamy sand

Bt horizon:
Color—dominantly hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8; hue of 5YR, value of 5 or 6, and chroma of 4 to 8 in some pedons
Texture—sandy loam, sandy clay loam, or sandy clay

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, and gray
Texture—sandy loam to sandy clay
Redoximorphic features—few to many masses of oxidized iron in shades of brown, yellow, red, or gray

C or Cd horizon:
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, and gray
Texture—loamy sand to clay
Redoximorphic features—common or many masses of oxidized iron in shades of brown, yellow, or red and iron depletions in shades of gray

Croatan Series

Major land resource area: Southern Coastal Plain
Landform: Depressions
Parent material: Organic material over loamy marine deposits
Drainage class: Very poorly drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, dysic, thermic Terric Haplosaprists

Geographically Associated Soils

- Grady soils, which have a clayey subsoil, are mineral throughout, and are in positions similar to those of the Croatan soils
- Pickney soils, which are sandy throughout and are in drainageways
- Surrency soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, have a dark surface layer that is thinner than that of the Croatan soils, and are in adjacent drainageways

Typical Pedon

Croatan mucky peat in an area of Dasher-Dorovan-Croatan association, ponded, 0 to 1 percent slopes; 9.2 miles south of Waycross along Swamp Road, 2.3 miles southeast of the junction of Swamp Road and Woodrow Cox Road along Woodrow Cox Road, 1,800 feet south and southeast along timber road from Woodrow Cox Road to the end of the road in Bear Pen Island, in the interior of the Okefenokee Swamp about 750 feet due south; Ware County, Georgia; Waycross SE, Georgia, 7.5-minute topographic quadrangle; lat. 31 degrees 2 minutes 7.27 seconds N. and long. 82 degrees 19 minutes 59.54 seconds W.

Oe—0 to 4 inches; mucky peat, dark brown (7.5YR 3/2) rubbed; 50 percent unrubbed fiber, 25 percent rubbed; weak medium granular structure; very friable, nonsticky; common fine and medium roots throughout; extremely acid; remaining fibers are mainly woody material; gradual smooth boundary.

Oa1—4 to 12 inches; very dark brown (7.5YR 2/2) muck; 20 percent unrubbed fiber, 10 percent rubbed; weak fine granular structure; very friable, nonsticky; common fine and medium roots throughout; extremely acid; remaining fibers are mainly woody material; diffuse wavy boundary.

Oa2—12 to 24 inches; black (10YR 2/1) muck; 20 percent unrubbed fiber, 10 percent rubbed; weak fine granular structure; very friable, nonsticky; common fine roots throughout; extremely acid; remaining fibers are mainly woody material; diffuse wavy boundary.

Oa3—24 to 28 inches; black (N 2/0) muck; 20 percent unrubbed fiber, 5 percent rubbed; weak fine granular structure; very friable, nonsticky; extremely acid; remaining fibers are mainly woody material; clear smooth boundary.

Ag—28 to 60 inches; black (10YR 2/1) mucky fine sandy loam; 18 percent clay; massive; very friable, nonsticky; 5 percent medium prominent yellowish brown (10YR 5/8) masses of oxidized iron throughout and 10 percent medium prominent light brownish gray (10YR 6/2) iron depletions throughout; extremely acid; gradual smooth boundary.

Cg—60 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; massive; friable, nonsticky; extremely acid.

Range in Characteristics

Thickness of the organic soil materials: 16 to 50 inches
Reaction: Extremely acid in the surface horizon; extremely acid to strongly acid throughout the underlying material

Oe horizon:
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of less than 3
Texture—mucky peat
Fiber content—3 to 30 percent unrubbed, less than 10 percent rubbed

Oa horizon:
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of less than 3
Texture—muck
Fiber content—3 to 30 percent unrubbed, less than 10 percent rubbed

Ag horizon:
Color—hue of 10YR, value of 2 to 6, and chroma of 1 or 2
Texture—mucky sandy loam, mucky fine sandy loam, sandy loam, loam, or fine sandy loam

Cg horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
Texture—sand to clay

Dothan Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flats on marine terraces and flats broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Well drained
Permeability class: Slow
Depth class: Very deep
Slope: 0 to 5 percent
Taxonomic classification: Fine-loamy, kaolinitic, thermic Plinthic Kandiudults

Geographically Associated Soils

- Clarendon soils, which are in the slightly lower positions and are moderately well drained
- Cowarts soils, which are in the more sloping upland positions and have less than 5 percent plinthite within a depth of 60 inches
- Fuquay soils, which are in positions similar to those of the Dothan soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Gritney soils, which are in the lower positions, are moderately well drained, and have a clayey subsoil
- Leefield soils, which are in the lower positions, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Nankin soils, which are in a fine textural family and do not have plinthite within a depth of 60 inches
- Norfolk soils, which are in positions similar to those of the Dothan soils and have less than 5 percent plinthite within a depth of 60 inches
- Stilson soils, which are in the slightly lower positions, are moderately well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Dothan loamy sand in an area of Dothan-Clarendon complex, 0 to 2 percent slopes; 1.9 miles northwest on Old Dixie Highway from its intersection with Georgia Highway 119, about 75 feet west of the road in a cultivated field; Effingham County, Georgia;

Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 24 minutes 17 seconds N. and long. 81 degrees 19 minutes 3 seconds W.

Ap—0 to 9 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; many fine and common medium roots; moderately acid; abrupt smooth boundary.

E—9 to 17 inches; yellowish brown (10YR 5/4) loamy sand; weak fine subangular blocky structure; very friable; common fine roots; moderately acid; clear smooth boundary.

Bt—17 to 42 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; few fine roots; few faint clay films on all faces of peds; common medium faint strong brown (7.5YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.

Btv1—42 to 52 inches; yellowish brown (10YR 5/4) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; common faint clay films on all faces of peds; common medium distinct strong brown (7.5YR 5/6) masses of oxidized iron; 7 percent plinthite nodules; strongly acid; clear smooth boundary.

Btv2—52 to 62 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common faint clay films on all faces of peds; common medium distinct strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/8) masses of oxidized iron; common medium distinct light brownish gray (10YR 6/2) and common medium faint pale brown (10YR 6/3) iron depletions; 10 percent plinthite nodules; strongly acid; gradual wavy boundary.

Btv3—62 to 68 inches; variegated 40 percent light brownish gray (10YR 6/2), 30 percent yellowish brown (10YR 5/4), and 30 percent strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; firm; few fine roots; few faint clay films on all faces of peds; 7 percent plinthite nodules; strongly acid; gradual wavy boundary.

BC1—68 to 74 inches; variegated 25 percent strong brown (7.5YR 5/6), 25 percent red (2.5YR 4/8), 25 percent light yellowish brown (10YR 6/4), and 25 percent light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; firm; few distinct clay films on all faces of peds; strongly acid; gradual wavy boundary.

BC2—74 to 80 inches; variegated 40 percent light gray (10YR 7/2), 30 percent very pale brown (10YR 7/4), and 30 percent yellowish brown (10YR 5/6) sandy clay loam; massive; friable; strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches

Plinthite: 5 to 18 percent between depths of 28 and 60 inches

Rock fragments: 0 to 5 percent, by volume, ironstone nodules in A and E horizons and in the upper part of the B horizon

Reaction: Very strongly acid to moderately acid throughout

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4

Texture—loamy sand or sandy loam

E horizon:

Color—hue of 2.5Y or 10YR, value of 5 or 6, and chroma of 3 to 6

Texture—loamy sand

Bt horizon:

Color—hue of 2.5Y or 10YR, value of 5 to 7, and chroma of 4 to 8

Texture—sandy loam or sandy clay loam

Redoximorphic features—few or common masses of oxidized iron in shades of brown and yellow

Btv horizon:
Color—hue 2.5Y or 10YR, value of 5 to 7, and chroma of 4 to 8; or no dominant matrix color and variegated in shades of red, yellow, brown, and gray
Texture—sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, brown, and yellow and iron depletions in shades of gray
Plinthite—5 to 35 percent, by volume

Bt´ horizon (where present):
Color—hue of 2.5Y or 10YR, value of 4 to 6, and chroma of 2 to 8
Texture—sandy clay loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 8, and chroma of 2 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

Eulonia Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Stream terraces
Parent material: Clayey fluviomarine deposits
Drainage class: Moderately well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 3 percent
Taxonomic classification: Fine, mixed, subactive, thermic Aquic Hapludults

Geographically Associated Soils

- Bladen soils, which are in the slightly lower positions and are poorly drained
- Chastain soils, which are on flood plains and are poorly drained
- Gritney soils, which are in the slightly higher positions
- Tawcaw soils, which are on flood plains and are somewhat poorly drained

Typical Pedon

Eulonia sandy loam, 0 to 3 percent slopes; about 2.1 miles east on Chimney Road from its intersection with Georgia Highway 21 in Rincon, Georgia, 1.8 miles south on Old Augusta Road, 0.8 mile east along an improved road through woods, in a cultivated field; Effingham County, Georgia; Port Wentworth, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 14 minutes 56 seconds N. and long. 81 degrees 11 minutes 10 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.
E—8 to 13 inches; light yellowish brown (10YR 6/4) sandy loam; weak medium granular structure; very friable; common fine and common medium roots; strongly acid; clear smooth boundary.
Bt1—13 to 24 inches; red (2.5YR 4/6) sandy clay; moderate medium subangular blocky structure; friable; common fine roots; common faint clay films on all faces of peds; few fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; strongly acid; clear smooth boundary.
Bt2—24 to 34 inches; red (2.5YR 4/6) clay; strong medium subangular blocky structure; firm; few fine roots; common faint clay films on all faces of peds;

common medium faint yellowish red (5YR 4/6) and common fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; common medium prominent light brownish gray (10YR 6/2) iron depletions; few fine mica flakes; strongly acid; clear wavy boundary.

Btg—34 to 44 inches; grayish brown (10YR 5/2) sandy clay; moderate medium subangular blocky structure; firm; few fine roots; common faint clay films on all faces of peds; many medium prominent red (2.5YR 4/6), common medium prominent yellowish red (5YR 4/6), and common fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; clear wavy boundary.

BCg—44 to 60 inches; grayish brown (10YR 5/2) sandy clay loam; weak medium subangular blocky structure; friable; many medium prominent red (2.5YR 5/6), common fine prominent strong brown (7.5YR 5/8), and few medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common fine mica flakes; strongly acid; gradual wavy boundary.

C—60 to 80 inches; 25 percent red (2.5YR 5/8), 25 percent grayish brown (10YR 5/2), 25 percent yellowish brown (10YR 5/6), and 25 percent strong brown (7.5YR 5/8) sandy clay loam; massive; very friable; many fine mica flakes; strongly acid.

Range in Characteristics

Thickness of the solum: 39 to more than 60 inches

Rock fragments: 0 to 5 percent, by volume, rounded quartz fragments throughout in most pedons

Reaction: Very strongly acid to slightly acid in the A horizon and the upper part of the B horizon; very strongly acid to moderately acid in the lower part of the B horizon and in the C horizon

Other: Few to many fine flakes of mica in the B and C horizons of most pedons

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 3; or neutral in hue and value of 3 to 6

Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

E horizon:

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 to 4

Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

Redoximorphic features (where present)—few or common masses of oxidized iron in shades of red, yellow, or brown

Bt horizon:

Color—dominantly hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; mottled without dominant matrix hue in the lower part of the horizon in some pedons

Texture—clay, sandy clay, or clay loam

Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of gray

Btg horizon:

Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2; or mottled without a dominant matrix hue

Texture—sandy clay or sandy clay loam

Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and common or many iron depletions in shades of gray

BCg horizon:

Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2; or mottled without a dominant matrix hue

Texture—sandy clay or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown

C horizon:
Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 8; or mottled without a dominant matrix hue
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown

Foxworth Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits
Drainage class: Moderately well drained to somewhat excessively drained
Permeability class: Rapid
Depth class: Very deep
Slope: 0 to 5 percent
Taxonomic classification: Thermic, coated Typic Quartzipsamments

Geographically Associated Soils

- Blanton soils, which have sandy surface and subsurface horizons with a combined thickness of 40 to 80 inches and are in positions similar to those of the Foxworth soils
- Chipley soils, which are in the lower positions and are somewhat poorly drained
- Lakeland soils, which are in positions similar to those of the Foxworth soils and do not have a seasonal high water table within a depth of 72 inches
- Meldrim soils, which are in the slightly lower positions, are moderately well drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Typical Pedon

Foxworth sand, 0 to 2 percent slopes; Effingham County, Georgia; 3.25 miles west of Guyton along Georgia Highway 119 from its intersection with U.S. Highway 17, about 200 feet north of the road; Guyton, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 18 minutes 27 seconds N. and long. 81 degrees 25 minutes 15 seconds W.

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) sand; single grain; loose; many fine roots; moderately acid; abrupt smooth boundary.
C1—8 to 35 inches; dark yellowish brown (10YR 5/8) sand; single grain; loose; common fine roots; common fine and common medium prominent white (10YR 8/1) streaks of uncoated sand grains; moderately acid; gradual wavy boundary.
C2—35 to 47 inches; yellowish brown (10YR 5/6) sand; single grain; loose; common fine roots; common fine and common medium prominent white (10YR 8/1) streaks of uncoated sand grains; moderately acid; gradual wavy boundary.
C3—47 to 57 inches; yellowish brown (10YR 5/6) sand; single grain; loose; few fine roots; common medium distinct light yellowish brown (10YR 6/4) and common medium faint strong brown (7.5YR 5/6) masses of oxidized iron; common fine and common medium prominent white (10YR 8/1) streaks of uncoated sand grains; moderately acid; gradual wavy boundary.
C4—57 to 69 inches; very pale brown (10YR 7/4) sand; single grain; loose; few fine roots; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; common medium distinct light gray (10YR 7/2) iron depletions; common fine

and common medium distinct white (10YR 8/1) streaks of uncoated sand grains; moderately acid; gradual wavy boundary.

Cg—69 to 80 inches; light gray (10YR 7/2) sand; single grain; loose; few fine roots; common medium faint very pale brown (10YR 7/3) and common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; moderately acid.

Range in Characteristics

Thickness of the solum: 3 to 15 inches
Thickness of sandy material: 80 inches or more
Reaction: Very strongly acid to slightly acid throughout, except where limed

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 1 to 3
Texture—sand or fine sand

C horizon, upper part:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sand, fine sand, or coarse sand
Other features—-few to many splotches or pockets of uncoated sand grains that are not indicative of wetness

C horizon, lower part:
Color—hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 3 to 6
Texture—sand, fine sand, or coarse sand
Redoximorphic features—common or many masses of oxidized iron in shades of brown, yellow, or red and common or many iron depletions in shades of gray
Other features—few to many uncoated sand grains

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2
Texture—sand or fine sand
Redoximorphic features—common masses of oxidized iron in shades of brown or red and common iron depletions in shades of brown

Fuquay Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits, loamy marine deposits, or both (fig. 8)
Drainage class: Well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults

Geographically Associated Soils

- Blanton soils, which are in positions similar to those of the Fuquay soils and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Clarendon soils, which are in the slightly lower positions, are moderately well drained, and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Cowarts soils, which are in the more sloping positions and have a solum that is less than 20 to 40 inches thick
- Dothan and Norfolk soils, which are in positions similar to those of the Fuquay soils and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more

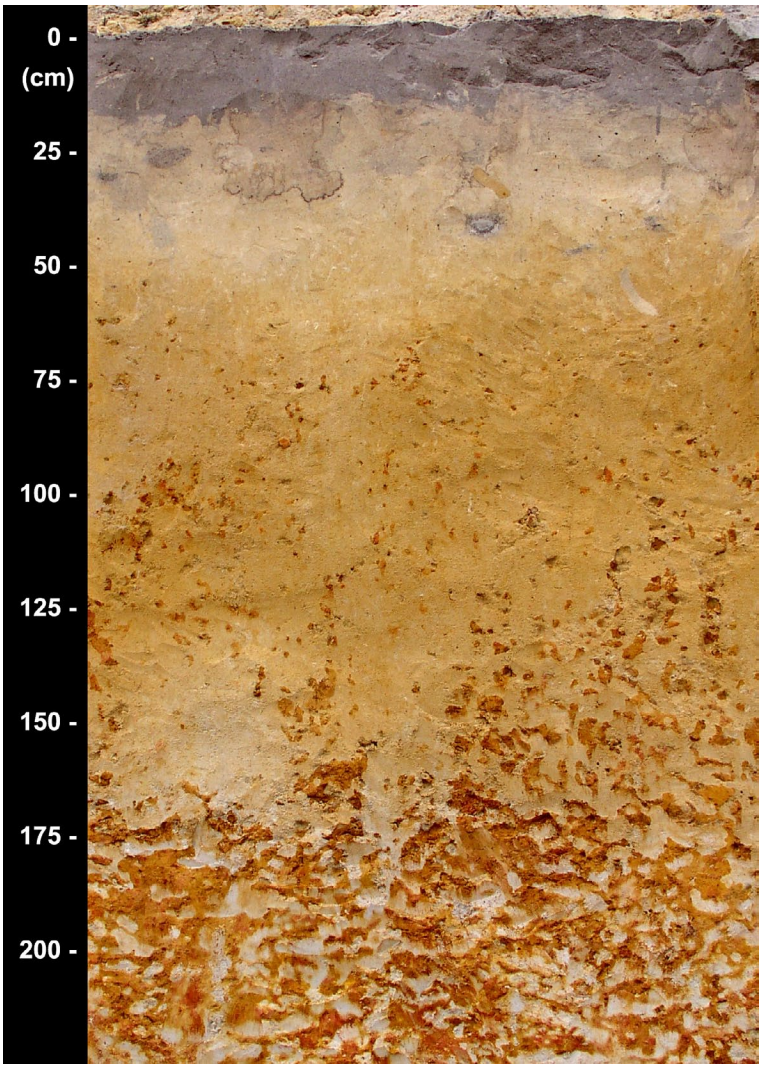

Figure 8.—Typical profile of Fuquay loamy sand.

- Gritney soils, which are in the lower positions, have a clayey subsoil, and are moderately well drained
- Meldrim soils, which are in the lower positions, are moderately well drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Nankin soils, which are in the more sloping positions, have a clayey subsoil, and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Uchee soils, which are in the more sloping positions and do not have plinthite within a depth of 60 inches

Typical Pedon

Fuquay loamy sand, 0 to 2 percent slopes; about 0.1 mile west on Georgia Highway 21 Spur from its intersection with Georgia Highway 119, about 7.0 miles north on Old Dixie Highway, 1.2 miles on Springfield Road, and 200 feet east of the road; Effingham County, Georgia; Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 29 minutes 3 seconds N. and long. 81 degrees 22 minutes 22 seconds W.

A—0 to 9 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; many fine and common medium roots; strongly acid; clear smooth boundary.
E—9 to 28 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; common fine and few coarse roots; strongly acid; gradual wavy boundary.
Bt1—28 to 38 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; strongly acid; gradual smooth boundary.
Bt2—38 to 44 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine distinct strong brown (7.5YR 5/8) masses of oxidized iron; strongly acid; gradual wavy boundary.
Btv1—44 to 56 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; many medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; 7 percent plinthite nodules; very strongly acid; gradual wavy boundary.
Btv2—56 to 63 inches; pale brown (10YR 6/3) sandy clay loam; weak medium subangular blocky structure; friable; common medium prominent yellowish red (5YR 5/8) and few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; common medium distinct gray (10YR 6/1) iron depletions; 5 percent plinthite nodules; very strongly acid; gradual wavy boundary.
C—63 to 80 inches; 40 percent yellowish brown (10YR 5/8), 40 percent light brownish gray (10YR 6/2), and 20 percent yellowish red (5YR 5/8) sandy loam; massive; firm; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more
Thickness of the sandy epipedon: 21 to 38 inches
Plinthite: 5 to 15 percent between depths of 26 and 60 inches
Rock fragments: 0 to 5 percent, by volume, ironstone nodules
Reaction: Extremely acid to moderately acid throughout, except where limed

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

E horizon:
Color—hue of 2.5YR or 10YR, value of 5 to 7, and chroma of 3 to 6
Texture—sand or loamy sand

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 5 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few or common masses of oxidized iron in shades of brown and yellowish red

Btv horizon:
Color—hue of 5YR to 2.5Y, value of 5 to 7, and chroma of 1 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of gray

Bt´ horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6
Texture—sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of brown and common iron depletions in shades of gray

BC horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6, and chroma of 2
Texture—loamy sand to sandy loam
Redoximorphic features—common masses of oxidized iron in shades of brown

C horizon:
Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8
Texture—loamy coarse sand, loamy sand, or sandy loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of brown, yellow, olive, or gray

Grady Series

Major land resource area: Southern Coastal Plain
Landform: Depressions
Parent material: Clayey marine deposits
Drainage class: Poorly drained
Permeability class: Slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine, kaolinitic, thermic Typic Paleudults

Geographically Associated Soils

- Croatan soils, which are commonly in the middle of large depressions and have a thick layer of highly decomposed organic material on the surface
- Herod soils, which are in a fine-loamy textural family and are on flood plains adjacent to the Grady soils
- Leefield soils, which are in the higher positions, are somewhat poorly drained, and have plinthite within a depth of 60 inches
- Muckalee soils, which are in a coarse-loamy textural family and are on flood plains adjacent to the Grady soils
- Pelham soils, which are in drainageways and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Grady loam in an area of Grady-Rembert association, 0 to 2 percent slopes, ponded; about 0.5 mile north on U.S. Highway 25 from Idlewood Crossing, 600 feet east of the highway; Burke County, Georgia; Idlewood, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 1 minute 19 seconds N. and long. 81 degrees 58 minutes 49 seconds W.

A—0 to 5 inches; dark gray (10YR 4/1) loam; weak fine granular structure; many fine and common medium roots; very strongly acid; clear smooth boundary.

Btg1—5 to 20 inches; gray (10YR 5/1) clay; moderate medium subangular blocky structure; few fine roots; common fine distinct strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Btg2—20 to 54 inches; gray (10YR 5/1) clay; moderate medium subangular blocky structure; few fine roots; common faint clay films on all faces of peds; common medium distinct yellowish brown (10YR 5/6) and common fine prominent red (2.5YR 4/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Btg3—54 to 65 inches; gray (10YR 5/1) sandy clay; moderate medium subangular blocky structure; common faint clay films on all faces of peds; common medium distinct yellowish brown (10YR 5/6) and common medium prominent yellowish red (5YR 5/6) masses of oxidized iron; common medium faint gray (10YR 6/1) iron depletions; very strongly acid; diffuse wavy boundary.

Btg4—65 to 80 inches; gray (10YR 5/1) clay; moderate medium subangular blocky structure; common faint clay films on all faces of peds; few fine distinct brown (7.5YR 5/4) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more
Reaction: Strongly acid to extremely acid throughout

A or Ap horizon:
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or loam

BE horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2
Texture—sandy clay loam or clay loam

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay or sandy clay
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or gray; in some pedons, the Bt horizon below a depth of about 30 inches is reticulately mottled in shades of gray, brown, and red

Gritney Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Clayey marine deposits (fig. 9)
Drainage class: Moderately well drained
Permeability class: Slow
Depth class: Very deep
Slope: 2 to 5 percent
Taxonomic classification: Fine, mixed, semiactive, thermic Aquic Hapludults

Geographically Associated Soils

- Cowarts soils, which are in a fine-loamy textural family, are well drained, and are in positions similar to those of the Gritney soils
- Dothan soils, which are in the slightly higher positions, are in a fine-loamy textural family, and contain more than 5 percent plinthite within a depth of 60 inches
- Eulonia soils, which are on stream terraces
- Fuquay soils, which are in the slightly higher positions, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Nankin soils, which are in positions similar to those of the Gritney soils and are well drained
- Ocilla soils, which are in the lower positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Rains soils, which are in the lower positions and are poorly drained

Typical Pedon

Gritney loamy sand, in an area of Cowarts-Gritney complex, 5 to 8 percent slopes; 0.8 mile north of Climax on Salem Church Road from its intersection with U.S. Highway 84, about 600 feet east of the road; Decatur County, Georgia; Climax North, Georgia,

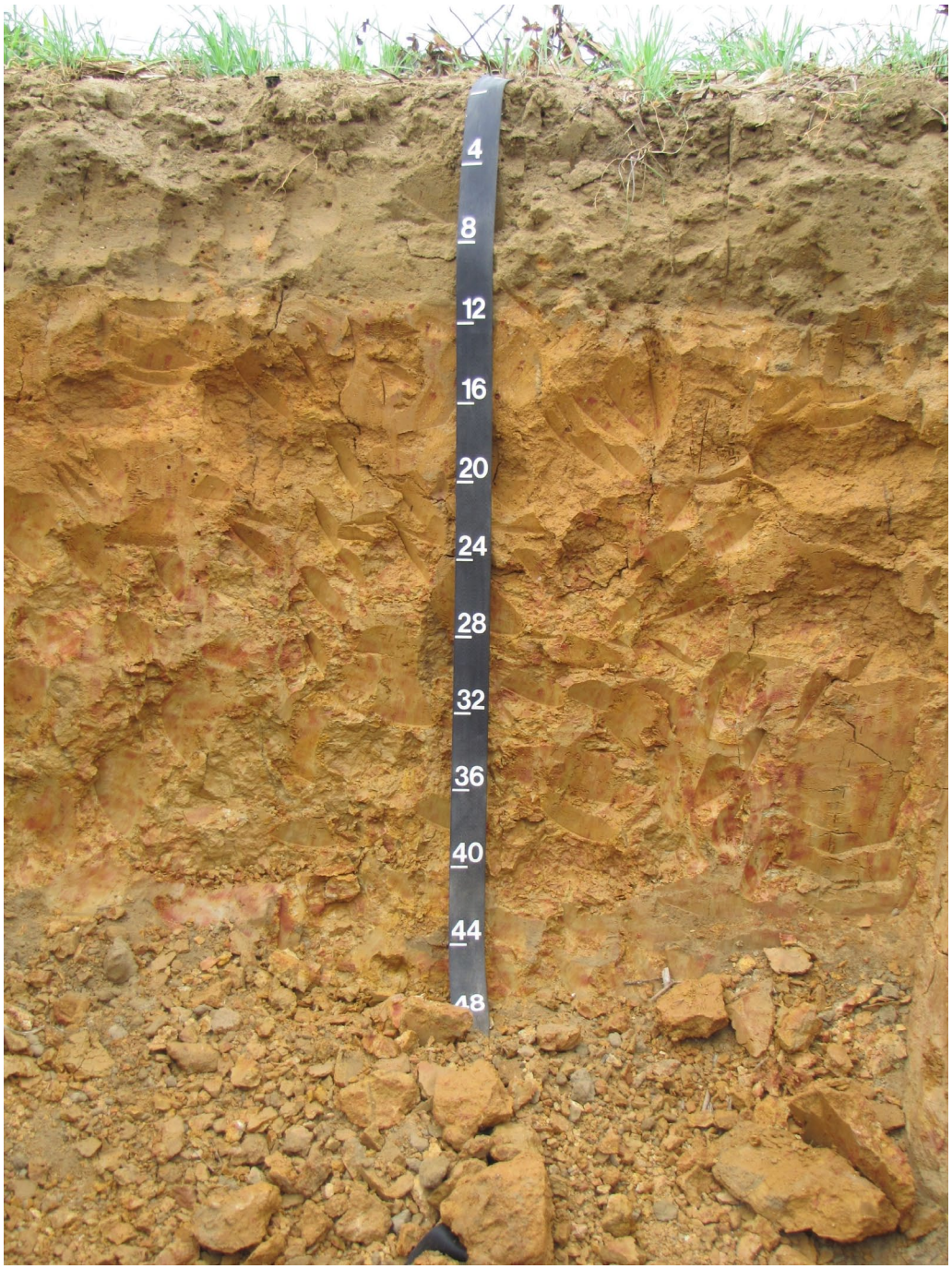

Figure 9.—Typical profile of Gritney loamy sand.

7.5-minute topographic quadrangle; lat. 30 degrees 53 minutes 23 seconds N. and long. 84 degrees 26 minutes 21 seconds W.

Ap—0 to 8 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; many fine and many very fine roots; very strongly acid; abrupt smooth boundary.

Bt1—8 to 18 inches; yellowish brown (10YR 5/8) sandy clay; moderate medium subangular blocky structure; firm; common fine and common medium roots; few

distinct clay films on all faces of peds; few fine prominent red (2.5YR 5/8) masses of oxidized iron; very strongly acid; clear wavy boundary.

Bt2—18 to 50 inches; variegated 45 percent reddish brown (2.5YR 4/4), 40 percent yellowish brown (10YR 5/8), and 15 percent light gray (5YR 7/1) sandy clay; moderate medium subangular blocky structure; firm; many distinct clay films on all faces of peds; extremely acid; gradual wavy boundary.

Cg—50 to 80 inches; light gray (10YR 7/1) clay loam; massive; very firm; common medium prominent yellowish brown (10YR 5/8) and common medium prominent reddish brown (2.5YR 4/4) masses of oxidized iron; extremely acid.

Range in Characteristics

Thickness of the solum: 35 to more than 60 inches
Content of pebbles: 0 to 10 percent
Reaction: Extremely acid to strongly acid throughout, except where limed

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

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 6
Texture—loamy sand or loamy fine sand

Bt horizon:
Color—hue of 5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8; or, in the middle or lower part, variegated in shades of red, brown, yellow, or gray
Texture—clay loam, sandy clay, or clay
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and few to many iron depletions in shades of gray

BC horizon (where present):
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 6; or variegated in shades of red, brown, yellow, or gray
Texture—sandy clay loam or sandy clay
Redoximorphic features—common or many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

Cg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2; or variegated in shades of red, brown, yellow, or gray
Texture—dominantly sandy clay loam, loam, or clay loam with lenses, pockets, or strata of loamy sand or sandy loam; clay in some pedons
Redoximorphic features—common masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

Herod Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Loamy alluvium
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents

Geographically Associated Soils

- Bibb soils, which are in a coarse-loamy textural family and are in positions similar to those of the Herod soils
- Grady soils, which have a clayey subsoil and are in depressions
- Kinston soils, which are in the acid reaction family and are in positions similar to those of the Herod soils
- Muckalee soils, which are in a coarse-loamy textural family and are in positions similar to those of the Herod soils

Typical Pedon

Herod loam in an area of Herod and Muckalee loams, 0 to 2 percent slopes, frequently flooded; 0.3 mile south on U.S. Highway 25 from Brier Creek, 500 feet east of the highway; Burke County, Georgia; Storys Millpond, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 9 minutes 31 seconds N. and long. 82 degrees 2 minutes 10 seconds W.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear wavy boundary.

Cg1—6 to 10 inches; light brownish gray (10YR 6/2) sandy loam; weak medium granular structure; friable; many fine and many medium roots; moderately acid; clear wavy boundary.

Cg2—10 to 22 inches; gray (10YR 6/1) sandy loam; massive; friable; few medium roots; common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron; slightly acid; gradual wavy boundary.

Cg3—22 to 39 inches; gray (10YR 6/1) sandy clay loam; massive; friable; common medium distinct light yellowish brown (10YR 6/4) and common medium distinct yellowish brown (10YR 5/4) masses of oxidized iron; slightly acid; gradual wavy boundary.

Cg4—39 to 80 inches; gray (10YR 6/1) sand; massive; friable; neutral.

Range in Characteristics

Thickness of loamy sediments: 20 to more than 40 inches

Reaction: Strongly acid or moderately acid in the A horizon; moderately acid to neutral in the C horizon

Clay content in the 10- to 40-inch control section: 18 to 35 percent

A horizon:

Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2

Texture—loam or sandy loam

Cg horizon (upper and middle parts):

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or hue of 2.5Y, value of 5 or 6, and chroma of 2

Texture—clay loam, loam, sandy clay loam, or sandy loam

Redoximorphic features—few to many masses of oxidized iron in shades of brown and iron depletions in shades of gray

Cg horizon (lower part):

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or hue of 2.5Y, value of 5 or 6, and chroma of 2

Texture—sandy loam or sandy clay loam; few or common 0.1- to 1.0-inch thick strata of loamy sand, sandy loam, sandy clay loam, clay loam, or clay in some pedons

Redoximorphic features—few to many masses of oxidized iron in shades of brown and iron depletions in shades of gray

Kinston Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Loamy alluvium
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts

Geographically Associated Soils

- Bibb soils, which are in a coarse-loamy textural family and are in positions similar to those of the Kinston soils
- Herod and Muckalee soils, which are in positions similar to those of the Kinston soils and are in the nonacid reaction class
- Ocilla soils, which are on stream terraces and are somewhat poorly drained
- Pelham soils, which are in a loamy textural family and are in drainageways adjacent to the Kinston soils
- Rains soils, which are in drainageways and have a more developed subsoil than that of the Kinston soils

Typical Pedon

Kinston loam, in an area of Kinston and Bibb soils, 0 to 2 percent slopes, frequently flooded; 1.2 miles east on Georgia Highway 192 from its intersection with U.S. Highway 1, about 80 feet north of the highway; Emanuel County, Georgia; Nunez, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 26 minutes 4 seconds N. and long. 82 degrees 16 minutes 51 seconds W.

A—0 to 6 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; very friable; many fine and many medium roots; very strongly acid; abrupt smooth boundary.
Cg1—6 to 23 inches; gray (10YR 5/1) sandy loam; weak fine granular structure; very friable; common fine and few medium roots; common fine prominent brownish yellow (10YR 6/6) and yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Cg2—23 to 48 inches; gray (10YR 5/1) sandy clay loam; massive; friable; few fine roots; common medium distinct pale brown (10YR 6/3) and common medium prominent strong brown (7.5YR 5/6) and yellowish red (5YR 5/8) masses of oxidized iron; very strongly acid; clear smooth boundary.
Cg3—48 to 80 inches; grayish brown (10YR 5/2) sandy loam; weak fine granular structure; friable; common medium distinct pale brown (10YR 6/3) and yellowish brown (10YR 5/4) masses of oxidized iron; very strongly acid.

Range in Characteristics

Depth to the base of the cambic horizon: 40 to 72 inches
Rock fragments: 0 to 3 percent, by volume, throughout
Reaction: Strongly acid or very strongly acid throughout, except where limed
Other: Common dark concretions in some pedons

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

Ag horizon (where present):
Color—hue of 10YR, value of 2 to 5, and chroma of 1; or neutral in hue and value of 3 to 5
Texture—loamy sand, loam, sandy loam, fine sandy loam, or silt loam

Bg horizon (where present):
Color—hue of 10YR, value of 3 to 7, and chroma of 1 to 2
Texture—fine sandy loam, sandy loam, loam, silt loam, clay loam, or sandy clay loam
Redoximorphic features (where present)—few or common masses of oxidized iron in shades of brown, yellow, and red
Other features—10- to 40-inch particle-size control section averages 20 to 35 percent clay and has 15 percent or more fine or coarser sand.

Cg horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 1 to 2
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—few or common masses of oxidized iron in shades of brown, yellow, or red
Other features—sandy textures in the Cg horizon are commonly below a depth of 40 inches, except for thin lenses in some pedons.

Lakeland Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Sandy marine deposits
Drainage class: Excessively drained
Permeability class: Rapid
Depth class: Very deep
Slope: 1 to 8 percent
Taxonomic classification: Thermic, coated Typic Quartzipsamments

Geographically Associated Soils

- Chipley soils, which are in the lower positions and have a seasonal high water table between depths of 18 to 36 inches
- Foxworth soils, which are in the slightly lower positions and have a seasonal high water table at a depth of 48 to 72 inches

Typical Pedon

Lakeland sand, 1 to 8 percent slopes; 0.6 mile southeast on River Road from Beaverdam Creek, 2.7 miles southwest on a dirt road, 0.2 mile north on a dirt road, and 10 feet west of the road; Burke County, Georgia; Alexander, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 5 minutes 32 seconds N. and long. 81 degrees 45 minutes 44 seconds W.

A—0 to 5 inches; brown (10YR 4/3) sand; single grain; loose; common fine roots; strongly acid; clear smooth boundary.
C1—5 to 20 inches; yellowish brown (10YR 5/4) sand; single grain; loose; few fine roots; very strongly acid; gradual wavy boundary.
C2—20 to 72 inches; strong brown (7.5YR 5/6) sand; single grain; loose; very strongly acid; gradual wavy boundary.
C3—72 to 80 inches; reddish yellow (7.5YR 6/6) sand; single grain; loose; very strongly acid.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Very strongly acid to moderately acid throughout, except where limed

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3
Texture—sand or fine sand

C horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 2 to 8
Texture—sand or fine sand
Other features—in some pedons below a depth of 40 inches, small pockets of sand grains in shades of gray that are not related to wetness or few masses of oxidized iron in shades of yellow or brown

Leefield Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Arenic Plinthaquic Paleudults

Geographically Associated Soils

- Albany soils, which are in positions similar to those of the Leefield soils, contain less than 5 percent plinthite, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Chipley soils, which are in positions similar to those of the Leefield soils and are sandy throughout
- Clarendon soils, which are in the slightly higher positions and are moderately well drained
- Dothan soils, which are in the higher positions and are well drained
- Grady soils, which are in the lower depressions and are poorly drained
- Ocilla soils, which are on stream terraces and contain less than 5 percent plinthite
- Pelham soils, which are in the lower positions and are poorly drained
- Rigdon soils, which are in the slightly lower positions and do not have spodic horizons
- Stilson soils, which are in the slightly higher positions and are moderately well drained

Typical Pedon

Leefield loamy sand, 0 to 2 percent slopes; about 4.1 miles north on Old Louisville Road from its intersection with Georgia Highway 119, about 600 feet west on field road, in a cultivated field; Effingham County, Georgia; Guyton, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 30 minutes 54 seconds N. and long. 81 degrees 26 minutes 30 seconds W.

Ap—0 to 10 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.

E1—10 to 24 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; common fine roots; common medium distinct strong brown (7.5YR 5/6) and common fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.

E2—24 to 29 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; few fine roots; common medium distinct yellowish brown (10YR 5/6) and common medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; common medium distinct light gray (10YR 7/2) iron depletions; strongly acid; clear smooth boundary.

Bt—29 to 34 inches; light yellowish brown (10YR 6/4) sandy loam; weak fine subangular blocky structure; very friable; few fine roots; common medium distinct yellowish brown (10YR 5/6) and common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common medium distinct light gray (10YR 7/2) iron depletions; strongly acid; clear smooth boundary.

Btv—34 to 41 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on all faces of peds; common medium prominent strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 4/8) masses of oxidized iron; common medium distinct light brownish gray (10YR 6/2) iron depletions; 10 percent plinthite nodules; strongly acid; gradual wavy boundary.

Btgv—41 to 53 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 5/8) masses of oxidized iron; 12 percent plinthite nodules; strongly acid; gradual wavy boundary.

B´t—53 to 71 inches; variegated red (2.5YR 4/8), strong brown (7.5YR 5/6), light yellowish brown (10YR 6/4), and light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; firm; few fine roots; few distinct clay films on all faces of peds; very strongly acid; gradual wavy boundary.

BC—71 to 80 inches; variegated yellowish red (5YR 5/8), red (2.5YR 5/6), dark yellowish brown (10YR 4/6), light brownish gray (10YR 6/2), and strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 65 inches or more
Thickness of the sandy epipedon: 21 to 38 inches
Plinthite: 5 to 15 percent between depths of 22 and 60 inches
Rock fragments: 0 to 3 percent, by volume, ironstone nodules
Reaction: Very strongly acid or strongly acid throughout, except where limed

A or Ap horizon:
- Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2; or neutral in hue and value of 3 or 4
- Texture—sand or loamy sand

E horizon:
- Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 4
- Texture—sand or loamy sand

Bt horizon:
- Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 8
- Texture—sandy loam or sandy clay loam
- Redoximorphic features—none to common masses of oxidized iron in shades of red, brown, or yellow and none to common iron depletions in shades of gray

Btv horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6
Texture—sandy loam or sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common or many iron depletions in shades of gray

Btgv horizon:
Color—hue of 10YR or 2.5Y, value of 6, and chroma of 1 or 2
Texture—sandy loam to sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 1 or 2
Texture—sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown

B´t horizon (where present):
Color—hue of 7.5YR, value of 5, and chroma of 8; or variegated in shades of red, brown, and gray
Texture—sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of olive and common iron depletions in shades of gray

BC horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 1 to 8; or variegated in shades of red, brown, and gray
Texture—sandy loam or sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of gray

Meldrim Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Moderately well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 5 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Oxyaquic Paleudults

Geographically Associated Soils

- Albany soils, which are in the lower positions and are somewhat poorly drained
- Blanton soils, which are in the slightly higher positions and are well drained
- Chipley soils, which are in the lower positions, are somewhat poorly drained, and are sandy throughout
- Foxworth soils, which are in the higher positions and are sandy throughout
- Fuquay soils, which are in the higher positions, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Meldrim sand, 0 to 5 percent slopes; about 1.3 miles north on Georgia Highway 17 from its intersection with U.S. Highway 80 in Faulkville, Georgia, 600 feet west of the highway, along a road through woods; Effingham County, Georgia; Meldrim, Georgia,

7.5-minute topographic quadrangle; lat. 32 degrees 9 minutes 7 seconds N. and long. 81 degrees 20 minutes 9 seconds W.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) sand; single grain; loose; many fine and many medium roots; moderately acid; clear smooth boundary.

E1—5 to 19 inches; brownish yellow (10YR 6/6) sand; single grain; loose; many fine and few medium roots; moderately acid; clear smooth boundary.

E2—19 to 37 inches; brownish yellow (10YR 6/6) sand; single grain; loose; few fine roots; common medium distinct yellowish brown (10YR 5/8) and few fine faint strong brown (7.5YR 5/6) masses of oxidized iron; moderately acid; many very pale brown (10YR 8/3) uncoated sand grains; gradual wavy boundary.

E3—37 to 50 inches; yellow (10YR 7/6) sand; single grain; loose; common medium distinct strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/8) masses of oxidized iron; common medium prominent light gray (10YR 7/2) iron depletions; strongly acid; many very pale brown (10YR 8/2) uncoated sand grains; gradual wavy boundary.

BE—50 to 56 inches; light yellowish brown (10YR 6/4) loamy fine sand; weak fine granular structure; very friable; common medium distinct yellowish brown (10YR 5/6), common medium distinct strong brown (7.5YR 5/6), and common medium prominent yellowish red (5YR 5/8) masses of oxidized iron; many medium prominent light gray (10YR 7/2) iron depletions; strongly acid; common very pale brown (10YR 8/2) uncoated sand grains; gradual wavy boundary.

Bt—56 to 63 inches; light yellowish brown (10YR 6/4) sandy loam; weak medium subangular blocky structure; friable; clay bridges between sand grains; common medium distinct strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/8) masses of oxidized iron; many medium distinct light gray (10YR 7/2) iron depletions; strongly acid; gradual wavy boundary.

Btg—63 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on all faces of peds; common medium prominent strong brown (7.5YR 5/6) and common medium prominent yellowish red (5YR 5/8) masses of oxidized iron; many medium faint light gray (10YR 7/2) iron depletions; 3 percent plinthite nodules; strongly acid.

Range in Characteristics

Thickness of the sandy epipedon: 40 to 80 inches

Thickness of the solum: More than 60 inches

Rock fragments: 0 to 35, by volume, in the A and E horizons and 0 to 10 percent in the B horizon; mostly fine quartz gravel

Plinthite: Less than 5 percent to a depth of 60 inches; 0 to 15 percent between depths of 60 and 80 inches

Reaction: Extremely acid to moderately acid throughout, except where limed

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 to 4; where value is 3.5 or less, the horizon is less than 10 inches thick.

Texture—sand, fine sand, coarse sand, loamy sand, or loamy fine sand

E horizon:

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8

Texture—sand, fine sand, coarse sand, loamy sand, or loamy fine sand; horizon commonly has varying amounts of uncoated sand grains.

Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

BE or EB horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8

Texture—loamy sand, loamy coarse sand, loamy fine sand, or sandy loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

Bt or Btv horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8; or variegated in shades of these colors
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

Btg horizon:
Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 1 or 2; or neutral in hue and value of 4 to 8
Texture—dominantly sandy loam, fine sandy loam, or sandy clay loam; ranging to sandy clay below a depth of about 60 inches
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown

Muckalee Series

Major land resource area: Southern Coastal Plain
Landform: Flood plains
Parent material: Sandy alluvium, loamy alluvium, or both
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Coarse-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents

Geographically Associated Soils

- Grady soils, which are clayey and are in depressions
- Herod soils, which are fine loamy and are in positions similar to those of the Muckalee soils
- Kinston and Bibb soils, which are in the acid reaction family and are in positions similar to those of the Muckalee soils

Typical Pedon

Muckalee loam in an area of Herod and Muckalee loams, 0 to 2 percent slopes, frequently flooded; 0.3 mile south on U.S. Highway 25 from Brier Creek, 500 feet east of the highway; Burke County, Georgia; Storys Millpond, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 9 minutes 31 seconds N. and long. 82 degrees 2 minutes 6 seconds W.

A—0 to 6 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear wavy boundary.
Cg1—6 to 55 inches; gray (10YR 5/1) sandy loam; massive; very friable; many fine and many medium roots; common medium distinct strong brown (7.5YR 5/8) and common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; moderately acid; gradual wavy boundary.
Cg2—55 to 80 inches; gray (10YR 5/1) sandy loam; massive; very friable; common medium roots; slightly acid.

Range in Characteristics

Depth to loamy and sandy sediments: 60 inches or more
Reaction: Strongly acid to neutral in the A horizon; moderately acid to moderately alkaline in the C horizon

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

Cg horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2
Texture—loamy sand or sandy loam; thin strata of sand, sandy clay loam, or clay loam in some pedons
Redoximorphic features—few to many masses of oxidized iron in shades of yellow, brown, or red and iron depletions in shades of gray

Nankin Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Clayey marine deposits
Drainage class: Well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 2 to 8 percent
Taxonomic classification: Fine, kaolinitic, thermic Typic Kanhapludults

Geographically Associated Soils

- Cowarts soils, which are in positions similar to those of the Nankin soils, are in a fine-loamy textural family, and have a solum that is 20 to 40 inches thick
- Dothan soils, which are in a fine-loamy textural family, have more than 5 percent plinthite within a depth of 60 inches, and are in the smoother, less sloping positions
- Fuquay soils, which are loamy, have more than 5 percent plinthite within a depth of 60 inches, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are in the smoother, less sloping positions
- Gritney soils, which are in the slightly lower positions and have a seasonal water table at a depth of 18 to 36 inches
- Ocilla soils, which are on the lower stream terraces, are somewhat poorly drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Nankin sandy loam in an area of Nankin-Cowarts complex, 5 to 8 percent slopes, eroded; 0.2 mile west on Georgia Highway 80 from its junction with Georgia Highway 305, about 450 feet north of the highway; Burke County, Georgia; Keysville SW, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 8 minutes 47 seconds N. and long. 82 degrees 13 minutes 22 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear smooth boundary.
Bt1—4 to 16 inches; strong brown (7.5YR 5/6) sandy clay; moderate medium subangular blocky structure; friable; common fine and common medium roots; few clay films on all faces of peds; strongly acid; clear wavy boundary.

Bt2—16 to 28 inches; strong brown (7.5YR 5/6) clay; common medium prominent red (2.5YR 4/8) and common medium distinct pale brown (10YR 6/3) mottles; strong medium angular blocky structure; firm; many clay films on all faces of peds; common medium prominent red (2.5YR 4/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Bt3—28 to 41 inches; variegated 34 percent yellowish red (5YR 4/6), 33 percent red (2.5YR 4/6), 17 percent dusky red (10R 3/4), and 16 percent light gray (10YR 7/1) sandy clay; strong medium angular blocky structure; firm; few fine roots; many clay films on all faces of peds; very strongly acid; gradual wavy boundary.

BCt—41 to 47 inches; variegated 34 percent dusky red (10R 3/4), 33 percent yellowish brown (10YR 5/6), 17 percent light gray (10YR 7/1), and 16 percent red (2.5YR 4/6) sandy clay loam; weak medium subangular blocky structure; firm; few fine roots; few clay films on all faces of peds; very strongly acid; gradual wavy boundary.

C—47 to 80 inches; variegated 34 percent yellowish red (5YR 5/6), 33 percent red (2.5YR 4/6), 17 percent light gray (10YR 7/1), and 16 percent pale brown (10YR 6/3) sandy loam; massive; very firm; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where limed
Nodules or fragments of ironstone: 0 to 25 percent, by volume, in the A and B horizons
Average clay content in the control section: 35 to 50 percent
Plinthite: 0 to 3 percent, by volume, in the Bt horizon

A or Ap horizon:
- Color—hue of 10YR, value of 3 or 4, and chroma of 2 to 4
- Texture—sandy loam or loamy sand
- Thickness—2 to 9 inches

E horizon (where present):
- Color—10YR, value of 4 to 6, and chroma of 2 to 4
- Texture—loamy sand

Bt horizon:
- Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; commonly multicolored in shades of red, yellow, and brown in the lower part of the horizon and, below a depth of 40 inches, gray
- Texture—sandy clay or clay
- Redoximorphic features—none to common masses of oxidized iron in shades of red and brown and common or many iron depletions in shades of gray below a depth of 40 inches

BC or BCt horizon (where present):
- Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 to 8
- 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 masses of oxidized iron in shades of yellow, brown, or red and common or many iron depletions in shades of gray

C horizon:
- Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6; or no dominant color and 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 masses of oxidized iron in shades of red, brown, or yellow and common or many iron depletions in shades of gray

Norfolk Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Well drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 5 percent
Taxonomic classification: Fine-loamy, kaolinitic, thermic Typic Kandiudults

Geographically Associated Soils

- Clarendon soils, which are in the slightly lower positions, are moderately well drained, and contain more than 5 percent plinthite within a depth of 60 inches
- Dothan soils, which are in positions similar to those of the Norfolk soils and contain more than 5 percent plinthite within a depth of 60 inches
- Fuquay soils, which are in positions similar to those of the Norfolk soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and contain more than 5 percent plinthite within a depth of 60 inches
- Rains soils, which are in the lower positions and are poorly drained

Typical Pedon

Norfolk loamy sand, 0 to 2 percent slopes; west 0.3 mile on South Carolina Highway 641 from its intersection with U.S. Highway 321, about 25 feet north of the highway; Allendale County, South Carolina; Sycamore, South Carolina, 7.5-minute topographic quadrangle; lat. 33 degrees 2 minutes 14 seconds N. and long. 81 degrees 13 minutes 38 seconds W.

Ap—0 to 10 inches; brown (10YR 5/3) loamy sand; weak fine granular structure; very friable; few fine roots; moderately acid; clear wavy boundary.
Bt1—10 to 17 inches; reddish yellow (7.5YR 6/8) sandy loam; weak fine granular structure; very friable; few fine roots; moderately acid; clear wavy boundary.
Bt2—17 to 30 inches; reddish yellow (7.5YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; few medium iron-manganese concretions; strongly acid; gradual wavy boundary.
Bt3—30 to 55 inches; reddish yellow (7.5YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; few fine prominent red (2.5YR 4/8) masses of oxidized iron; strongly acid; gradual wavy boundary.
Bt4—55 to 80 inches; reddish yellow (7.5YR 6/8) sandy clay loam; weak fine subangular blocky structure; friable; few faint clay films on all faces of peds; common medium prominent red (10R 4/8) masses of oxidized iron; few medium distinct light brownish gray (10YR 6/2) iron depletions; 1 percent plinthite nodules; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where limed
Rock fragments: 0 to 5 percent, by volume, throughout; mostly quartz pebbles or ironstone nodules
Plinthite: 0 to 4 percent to a depth of 60 inches; 0 to more than 10 percent below a depth of 60 inches

Ap or A horizon (where present):
Color—hue of 10YR, value of 4 or 5, and chroma of 2 or 3
Texture—loamy sand or sandy loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4
Texture—loamy sand

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or olive

BC horizon (where present):
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of these colors
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, olive, or gray

Ocilla Series

Major land resource area: Southern Coastal Plain
Landform: Stream terraces
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

Geographically Associated Soils

- Albany soils, which are in positions similar to those of the Ocilla soils and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Bibb and Kinston soils, which are on flood plains, are poorly drained, and do not have a Bt horizon
- Bladen soils, which are on the lower stream terraces, are in a fine textural family, and are poorly drained
- Clarendon and Stilson soils, which are moderately well drained and have more than 5 percent plinthite in the subsoil
- Gritney soils, which are in the higher positions, have a clayey subsoil, and are moderately well drained
- Leefield soils, which are in positions similar to those of the Ocilla soils and contain more than 5 percent plinthite within a depth of 60 inches
- Nankin soils, which are in the slightly higher positions in the uplands, have a clayey subsoil, and are well drained
- Pelham soils, which are in the lower positions and are poorly drained
- Pickney soils, which are in drainageways, are very poorly drained, and have a thick, dark surface layer
- Rains soils, which are in the lower positions and are poorly drained

Typical Pedon

Ocilla loamy sand, 0 to 2 percent slopes; 0.3 mile north on U.S. Highway 25 from Brier Creek, 0.6 mile west on a dirt road, and 150 feet south of the road; Burke County, Georgia; Storys Millpond, Georgia, 7.5-minute topographic quadrangle; lat. 33 degrees 9 minutes 54 seconds N. and long. 82 degrees 2 minutes 57 seconds W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; many fine and many very fine roots; moderately acid; abrupt smooth boundary.
E1—7 to 16 inches; light brownish gray (2.5Y 6/2) loamy sand; weak fine granular structure; loose; common fine and common medium roots; very strongly acid; clear wavy boundary.
E2—16 to 21 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; strongly acid; clear smooth boundary.
BE—21 to 25 inches; yellowish brown (10YR 5/6) sandy loam; moderate medium subangular blocky structure; friable; many medium distinct red (2.5YR 4/8) and yellowish red (5YR 5/8) masses of oxidized iron; many medium distinct pale brown (10YR 6/3) iron depletions; strongly acid; gradual wavy boundary.
Bt—25 to 32 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; many medium distinct yellowish red (5YR 5/8) masses of oxidized iron; many medium distinct gray (10YR 6/1) and many medium distinct pale brown (10YR 6/3) iron depletions; very strongly acid; clear wavy boundary.
Btg—32 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; massive; friable; few medium distinct yellowish brown (10YR 5/6) and few medium prominent red (2.5YR 4/8) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more
Thickness of the sandy epipedon: 22 to 38 inches
Plinthite: 0 to 3 percent in the subsoil
Reaction: Strongly acid or very strongly acid throughout, except where limed

A or Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 or 2
Texture—loamy sand or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4
Texture—sand or loamy sand
Redoximorphic features—few fine masses of oxidized iron in shades of brown in the lower part of the horizon in some pedons

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:
Color—hue of 10YR, value of 5 to 7, and chroma of 3 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few or common masses of oxidized iron in shades of brown, red, or yellow and few or common iron depletions in shades of gray

Btg horizon:
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red or brown

Pelham Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Depressions and drainageways

Parent material: Loamy alluvium
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Arenic Paleaquults

Geographically Associated Soils

- Bladen soils, which are on stream terraces and are poorly drained
- Bibb soils, which are in a coarse-loamy textural family and are on flood plains adjacent to the Pelham soils
- Grady soils, which are in depressions, have a clayey subsoil, and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Kinston soils, which are in a fine-loamy textural family and are on flood plains adjacent to the Pelham soils
- Leefield soils, which are in the slightly higher positions, contain more than 5 percent plinthite, and are somewhat poorly drained
- Ocilla soils, which are on the slightly higher stream terraces and are somewhat poorly drained
- Rains soils, which are on flats along drainageways and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Rigdon soils, which are in the slightly higher positions, have spodic horizons, and are somewhat poorly drained
- Surrency soils, which are in positions similar to those of the Pelham soils, are very poorly drained, and have a thick, dark surface layer

Typical Pedon

Pelham loamy sand, 0 to 2 percent slopes; 3.4 miles southeast of Clyo along Clyo-Stillwell Road, 1.3 mile west of Sisters Ferry Road, and 200 feet north of road along an improved road through woods; Effingham County, Georgia; Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 27 minutes 46 seconds N. and long. 81 degrees 26 minutes 34 seconds W.

Ap—0 to 6 inches; very dark gray (10YR 3/1) loamy sand; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear smooth boundary.

Eg1—6 to 18 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; common fine and common medium roots; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; few medium faint gray (10YR 6/1) iron depletions; strongly acid; clear wavy boundary.

Eg2—18 to 33 inches; light brownish gray (10YR 6/2) loamy sand; weak fine granular structure; friable; common medium roots; few fine prominent brownish yellow (10YR 6/6) masses of oxidized iron; strongly acid; many faint light gray sand grains; gradual wavy boundary.

Btg1—33 to 41 inches; gray (10YR 6/1) sandy loam; weak fine subangular blocky structure; friable; clay bridges between sand grains; many medium prominent brownish yellow (10YR 6/8) masses of oxidized iron; strongly acid; gradual wavy boundary.

Btg2—41 to 66 inches; gray (10YR 6/1) sandy clay loam; moderate fine subangular blocky structure; friable; clay bridges between sand grains; common coarse prominent brownish yellow (10YR 6/6) and common coarse prominent strong brown (7.5YR 5/8) masses of oxidized iron; common fine faint light gray (10YR 7/1) iron depletions; strongly acid; common pockets of sandy loam; gradual wavy boundary.

Cg—66 to 80 inches; light gray (10YR 7/1) sandy loam; massive; very friable; many medium prominent brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Thickness of sandy material: 22 to 38 inches
Reaction: Extremely acid to strongly acid throughout, except where limed

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

Eg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—loamy fine sand, loamy sand, loamy coarse sand, fine sand, sand, or coarse sand
Redoximorphic features—few or common masses of oxidized iron in shades of brown or yellow and none or few iron depletions in shades of gray

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy clay loam, very fine sandy loam, fine sandy loam, sandy loam, or sandy clay
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and none to many iron depletions in shades of gray

BCg or Cg horizon:
Color—hue of 10YR, value of 3 to 7, and chroma of 1 or 2
Texture—fine sandy loam, sandy loam, loamy sand, or sand
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and none to many iron depletions in shades of gray

Pickney Series

Major land resource area: Atlantic Coast Flatwoods and Southern Coastal Plain
Landform: Drainageways and depressions
Parent material: Sandy alluvium
Drainage class: Very poorly drained
Permeability class: Rapid
Depth class: Very deep
Slope: 0 to 1 percent
Taxonomic classification: Sandy, siliceous, thermic Cumulic Humaquepts

Geographically Associated Soils

- Chipley soils, which are in the slightly higher positions and are somewhat poorly drained
- Croatan soils, which are in depressions and have a dark surface layer that ranges in thickness from 16 to 51 inches. The surface layer of the Croatan soils is thicker than that of the Pickney soils.
- Ocilla soils, which are in the slightly higher positions and are somewhat poorly drained
- Rigdon soils, which are in the slightly higher positions, have spodic horizons, and are somewhat poorly drained

- Surrency soils, which have a dark surface layer that is less than 24 inches thick and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches. The surface layer of the Surrency soils is thinner than that of the Pickney soils.

Typical Pedon

Pickney mucky sand, 0 to 2 percent slopes, frequently flooded; about 3.9 miles south of Guyton on Georgia Highway 17, about 5.2 miles southeast from the intersection of Georgia Highway 17 and Midland Road, 100 feet north of the road; Effingham County, Georgia; Meldrim, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 13 minutes 29 seconds N. and long. 81 degrees 19 minutes 28 seconds W.

A1—0 to 20 inches; black (10YR 2/1) mucky sand; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear smooth boundary.
A2—20 to 38 inches; very dark brown (10YR 2/2) loamy fine sand; weak fine granular structure; very friable; common fine and common medium roots; very strongly acid; clear smooth boundary.
Cg1—38 to 50 inches; grayish brown (10YR 5/2) loamy fine sand; weak fine granular structure; very friable; common fine and common medium roots; common sand coats on all faces of peds; very strongly acid; clear smooth boundary.
Cg2—50 to 65 inches; light brownish gray (10YR 6/2) sand; common medium faint white (10YR 8/1) mottles; single grain; loose; few fine roots; strongly acid; clear smooth boundary.
Cg3—65 to 80 inches; gray (10YR 5/1) sand; single grain; loose; moderately acid.

Range in Characteristics

Thickness of sandy material: 60 inches or more
Reaction: Extremely acid to moderately acid

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2
Texture—sand, fine sand, loamy fine sand, or loamy sand or the mucky analogs of these textures

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2
Texture—sand, fine sand, loamy fine sand, or loamy sand
Redoximorphic features (where present)—few or common masses of oxidized iron in shades of red, yellow, or brown

Rains Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flats on marine terraces and flats broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults

Geographically Associated Soils

- Bibb soils, which are on flood plains and are in a coarse-loamy textural family
- Clarendon soils, which are in the higher positions, contain more than 5 percent plinthite within a depth of 60 inches, and are moderately well drained
- Gritney soils, which in the higher positions, have a clayey subsoil, and are moderately well drained

- Kinston soils, which are on flood plains and do not have well developed clayey horizons
- Norfolk soils, which are in the higher positions and are well drained
- Ocilla soils, which are in the higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are somewhat poorly drained
- Pelham and Surrency soils, which are in drainageways and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Typical Pedon

Rains loamy sand, 0 to 2 percent slopes; about 0.1 mile west of Georgia Highway 119 on Clyo-Kildare Road, 1.4 miles southwest on Clyo-Shawnee Road, and 0.25 mile northeast of Clyo-Shawneee Road along an improved road through woods; Effingham County, Georgia; Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 29 minutes 17 seconds N. and long. 81 degrees 17 minutes 23 seconds W.

A—0 to 6 inches; very dark gray (10YR 3/1) loamy sand; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear smooth boundary.

Eg—6 to 18 inches; dark gray (10YR 4/1) loamy sand; weak fine granular structure; very friable; common medium roots; few fine faint masses of oxidized iron; few fine faint gray (10YR 6/1) iron depletions; strongly acid; clear wavy boundary.

Btg1—18 to 28 inches; grayish brown (10YR 5/2) sandy loam; weak fine subangular blocky structure; very friable; few fine and few medium roots; clay bridges between sand grains; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.

Btg2—28 to 50 inches; grayish brown (10YR 5/2) sandy clay loam; weak fine subangular blocky structure; friable; few fine roots; few faint clay films on all faces of peds; common coarse prominent yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

Btg3—50 to 60 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

Btg4—60 to 70 inches; gray (10YR 5/1) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

BCg—70 to 80 inches; gray (10YR 5/1) sandy clay loam; weak fine granular structure; friable; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more
Reaction: Extremely acid to strongly acid throughout, except where limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2; or neutral in hue and value of 2 to 5
Texture—fine sandy loam, sandy loam, loamy fine sand, loamy sand, or sand

Eg 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—fine sandy loam, sandy loam, loamy fine sand, loamy sand, or sand

Redoximorphic features—few or common masses of oxidized iron in shades of red, yellow, or brown

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy loam or sandy clay loam
Redoximorphic features—few or common masses of oxidized iron in shades of red, yellow, or brown

BCg horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown

Remlik Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Escarpments
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Well drained
Permeability class: Slow
Depth class: Very deep
Slope: 15 to 60 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Arenic Hapludults

Geographically Associated Soils

- Blanton soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are on the broader, upland flats
- Cowarts soils, which are in positions similar to those of the Remlik soils and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more

Typical Pedon

Remlik loamy sand in an area of Remlik-Blanton complex, 15 to 60 percent slopes; about 0.5 mile south on Laurel Street from its intersection with Georgia Highway 119, about 9.4 miles east on Stillwell-Clyo Road, 2.3 miles north on Laurel Tree Road, and 260 feet east of the road; Effingham County, Georgia; Brighton, South Carolina 7.5-minute topographic quadrangle; lat. 32 degrees 28 minutes 42 seconds N. and long. 81 degrees 13 minutes 4 seconds W.

A—0 to 8 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; many fine and many medium roots; strongly acid; clear wavy boundary.
E—8 to 30 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; common medium and few fine roots; strongly acid; clear smooth boundary.
Bt—30 to 57 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; few medium roots; strongly acid; clear smooth boundary.
BC—57 to 80 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; common fine faint strong brown (7.5YR 5/6) masses of oxidized iron; few fine prominent light brownish gray (10YR 6/2) iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches
Thickness of the sandy epipedon: 20 to 40 inches
Reaction: Extremely acid to moderately acid throughout, except where limed

A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 2 to 4
Texture—sand or loamy sand

E horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sand or loamy sand

EB horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loamy sand or loamy fine sand

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—none or few masses of oxidized iron in shades of red or brown

BC horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of brown, white, or gray

C or 2C horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; or variegated in shades of these colors
Texture—sand, loamy sand, loamy fine sand, or sandy loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of brown, white, or gray

Rigdon Series

Major land resource area: Atlantic Coast Flatwoods
Landform: Flats on marine terraces
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Oxyaquic Alorthods

Geographically Associated Soils

- Leefield soils, which are in the slightly higher positions and do not have spodic horizons
- Pelham soils, which are in the lower positions, do not have spodic horizons, and are poorly drained
- Pickney soils, which are in the lower positions, are sandy throughout, do not have spodic horizons, and are very poorly drained
- Surrency soils, which are in the lower positions, do not have spodic horizons, and are very poorly drained

Typical Pedon

Rigdon sand, 0 to 2 percent slopes; 1.25 miles south on Georgia Highway 17 from its intersection with Georgia Highway 119 at Guyton, 0.6 mile east on Go Cart Road, 0.6 mile northwest on an unimproved road through woods, and 100 feet west of the road; Effingham County, Georgia; Springfield North, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 17 minutes 54 seconds N. and long. 81 degrees 22 minutes 38 seconds W.

Ap—0 to 6 inches; black (10YR 2/1) sand; weak fine granular structure; very friable; many fine and common medium roots; very strongly acid; abrupt smooth boundary.

Bh—6 to 11 inches; dark brown (7.5YR 3/2) sand; friable; common fine and few medium roots; common medium faint dark reddish brown (5YR 3/3) masses of oxidized iron; very strongly acid; clear wavy boundary.

E1—11 to 20 inches; pale brown (10YR 6/3) sand; single grain; loose; common fine and few medium roots; common medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

E2—20 to 36 inches; pale brown (10YR 6/3) sand; single grain; loose; common medium prominent brownish yellow (10YR 6/8) masses of oxidized iron; common medium faint light gray (10YR 7/2) iron depletions; very strongly acid; clear smooth boundary.

Btg1—36 to 49 inches; light brownish gray (10YR 6/2) sandy clay loam; weak fine subangular blocky structure; friable; few fine and few medium roots; common medium prominent yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 4/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Btg2—49 to 80 inches; light gray (10YR 7/1) sandy clay loam; weak fine subangular blocky structure; friable; few fine and few medium roots; few faint clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/6), common medium prominent strong brown (7.5YR 5/8), and common medium prominent dark red (2.5YR 3/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 inches or more
Thickness of the sandy epipedon: 24 to 39 inches
Depth to the top of the Bh horizon: 5 to 13 inches
Reaction: Extremely acid to strongly acid throughout, except where limed

A or Ap horizon:
- Color—hue of 10YR or 5Y, value of 2 to 4, and chroma of 1 or 2
- Texture—sand, fine sand, or loamy sand

Bh horizon:
- Color—hue of 5YR or 7.5YR, value of 2 to 4, and chroma of 1 to 4
- Texture—sand, fine sand, or loamy sand
- Redoximorphic features (where present)—few or common masses of oxidized iron in shades of brown or yellow

E horizon:
- Color—dominantly hue of 10YR to 5Y, value of 5 to 8, and chroma of 3 to 6; chroma of 1 or 2 in the lower part of the horizon in some pedons
- Texture—sand, fine sand, loamy sand, or loamy fine sand
- Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, or brown and few or common iron depletions in shades of pale brown or gray

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 1 or 2
Texture—sandy clay loam, sandy loam, or fine sandy loam
Redoximorphic features—few to many masses of oxidized iron in shades of red, brown, or yellow and few or common iron depletions in shades of pale brown or gray

Stilson Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Broad interstream divides
Parent material: Loamy marine deposits, sandy marine deposits, or both
Drainage class: Moderately well drained
Permeability class: Moderate
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Oxyaquic Paleudults

Geographically Associated Soils

- Clarendon soils, which are in positions similar to those of the Stilson soils and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Dothan soils, which are in the higher positions and are well drained
- Leefield soils, which are in the slightly lower positions and are somewhat poorly drained
- Ocilla soils, which are on the lower stream terraces and are somewhat poorly drained

Typical Pedon

Stilson loamy sand, 0 to 2 percent slopes; about 2.4 miles southeast on Leola Road from its intersection with Georgia Highway 21, about 600 feet north of the road in a cultivated field, about 10 feet from the field border; Screven County, Georgia; Kildare, Georgia-South Carolina 7.5-minute topographic quadrangle; lat. 32 degrees 34 minutes 27 seconds N. and long. 81 degrees 27 minutes 10 seconds W.

A—0 to 9 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.
E—9 to 26 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.
Bt—26 to 35 inches; brownish yellow (10YR 6/6) sandy loam; weak fine subangular blocky structure; friable; common fine roots; common medium distinct strong brown (7.5YR 5/6) masses of oxidized iron; strongly acid; clear smooth boundary.
Btv1—35 to 48 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; few faint clay films on faces of peds; 5 percent nodular plinthite; many medium distinct strong brown (7.5YR 5/6) masses of oxidized iron and common medium distinct light gray (10YR 7/2) iron depletions; strongly acid; gradual wavy boundary.
Btv2—48 to 61 inches; brownish yellow (10YR 6/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few fine pores; few faint clay films on faces of peds; 10 percent platy plinthite; common medium distinct reddish yellow (7.5YR 7/6) masses of oxidized iron and many medium distinct light gray (10YR 7/2) iron depletions; very strongly acid; gradual wavy boundary.
B´t—61 to 77 inches; strong brown (7.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; firm; common fine pores; few distinct clay films on

faces of peds; 2 percent nodular plinthite; common medium prominent dark red (2.5YR 3/6) masses of oxidized iron and common medium prominent light gray (10YR 7/1) iron depletions; strongly acid; clear wavy boundary.

BC—77 to 80 inches; strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; common fine pores; few medium distinct clay films on faces of peds; common medium prominent dark red (2.5YR 3/6) masses of oxidized iron and common medium prominent light gray (10YR 7/1) iron depletions; common fine pores; very strongly acid.

Range in Characteristics

Thickness of the solum: 69 inches or more
Thickness of the sandy epipedon: 20 to 36 inches
Plinthite: 5 to 18 percent between depths of 25 and 60 inches
Rock fragments: 0 to 5 percent, by volume, ironstone nodules
Reaction: Very strongly acid or strongly acid throughout, except where limed

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

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sand or loamy sand

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features (where present)—few or common masses of oxidized iron in shades of red, yellow, or brown

Btv horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6
Texture—sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and common iron depletions in shades of gray

B´t horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 8; or no dominant color and mottled in shades of red, yellow, brown, and gray
Texture (fine-earth fraction)—clay loam or sandy clay loam
Redoximorphic features (where present)—common or many masses of oxidized iron in shades of red, brown, or yellow and iron depletions in shades of gray

Btgv horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6, and chroma of 1 or 2
Texture—sandy loam to sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 1 or 2
Texture—sandy clay loam
Redoximorphic features—common masses of oxidized iron in shades of red, yellow, or brown

BC horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam

Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and none to common iron depletions in shades of gray

Surrency Series

Major land resource area: Atlantic Coast Flatwoods and Southern Coastal Plain
Landform: Depressions and drainageways
Parent material: Sandy marine deposits, loamy marine deposits, or both
Drainage class: Very poorly drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 1 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults

Geographically Associated Soils

- Bladen soils, which are in the higher positions, have a clayey subsoil, and are poorly drained
- Croatan soils, which are in depressions and have a dark surface layer that is thicker than that of the Surrency soils
- Pelham soils, which are in positions similar to those of the Surrency soils, are poorly drained, and do not have a thick, dark surface layer
- Pickney soils, which are sandy throughout and have a dark surface layer that is more than 24 inches thick. The surface layer of the Pickney soils is thicker than that of the Surrency soils.
- Rains soils, which have are in the slightly higher positions and do not have sandy surface and subsurface layers with a combined thickness of more than 20 inches
- Rigdon soils, which are in the slightly higher positions, have spodic horizons, and are somewhat poorly drained

Typical Pedon

Surrency mucky sand, 0 to 1 percent slopes, frequently flooded; 1.2 miles west on Oliver-Kildare Road from its intersection with Georgia Highway 21, about 0.1 mile north on an unimproved road through woods; Effingham County, Georgia; Kildare, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 31 minutes 41 seconds N. and long. 81 degrees 28 minutes 45 seconds W.

A—0 to 22 inches; black (10YR 2/1) mucky sand; weak fine granular structure; very friable; many fine and common medium roots; very strongly acid; gradual wavy boundary.

Btg1—22 to 35 inches; dark gray (10YR 4/1) sandy loam; weak medium subangular blocky structure; friable; common medium and few fine roots; very strongly acid; gradual wavy boundary.

Btg2—35 to 58 inches; dark gray (10YR 4/1) sandy clay loam; weak medium subangular blocky structure; friable; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; few sand lenses on faces of peds; gradual wavy boundary.

Btg3—58 to 80 inches; dark gray (10YR 4/1) sandy clay loam; weak medium subangular blocky structure; friable; common medium prominent strong brown (7.5YR 5/8) and few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to 100 inches
Thickness of the sandy epipedon: 20 to 40 inches
Reaction: Extremely acid to strongly acid throughout, except where limed

A horizon:
Color—hue of 10YR, 2.5Y, or 5Y; value of 2 or 3; and chroma of 1 or 2; or neutral in hue and value of 2 or 3
Texture—sand, fine sand, loamy sand, loamy fine sand, mucky sand, or mucky fine sand

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sand, fine sand, loamy sand, or loamy fine sand
Redoximorphic features (where present)—common or many masses of oxidized iron in shades of red, yellow, or brown and none to common iron depletions in shades of olive or gray

Btg horizon:
Color—hue of 10YR, 2.5Y, 5Y, or 5G; value of 4 to 7; and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and none to common iron depletions in shades of olive or gray
Clay content—dominantly 10 to 18 percent in the control section and, below a depth of about 50 inches, 23 to 35 percent

Cg horizon (where present):
Color—hue of 10YR to 5GY, value of 5 to 7, and chroma of 1 or 2
Texture—fine sand, loamy fine sand, fine sandy loam, or sandy clay loam
Redoximorphic features (where present)—common or many masses of oxidized iron in shades of red, yellow, or brown and none to common iron depletions in shades of olive or gray

Tawcaw Series

Major land resource area: Southern Coastal Plain and Atlantic Coast Flatwoods
Landform: Flood plains
Parent material: Silty and clayey alluvium
Drainage class: Somewhat poorly drained
Permeability class: Slow
Depth class: Very deep
Slope: 0 to 2 percent
Taxonomic classification: Fine, kaolinitic, thermic Fluvaquentic Dystrudepts

Geographically Associated Soils

- Bladen soils, which are on stream terraces and are poorly drained
- Chastain soils, which are in the slightly lower positions on the flood plains and are poorly drained
- Eulonia soils, which are on stream terraces adjacent to the Tawcaw soils and are moderately well drained

Typical Pedon

Tawcaw silty clay loam in an area of Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded; about 10.8 miles northeast on Brannens Bridge Road from Sylvania, Georgia, 3.6 miles east on a gravel road, 400 feet south on an unimproved road, and 50 feet east of the road; Screven County, Georgia; Brier Creek Landing, Georgia, 7.5-minute topographic quadrangle; lat. 32 degrees 48 minutes 1 second N. and long. 81 degrees 25 minutes 54 seconds W.

A—0 to 2 inches; brown (7.5YR 4/3) silty clay loam; weak fine granular structure; friable; many fine roots; few mica flakes; moderately acid; clear smooth boundary.

Bw1—2 to 18 inches; yellowish brown (10YR 5/4) silty clay loam; weak medium subangular blocky structure; friable; common fine and few medium roots; few medium faint pale brown (10YR 6/3) iron depletions; common iron-manganese concretions; few mica flakes; common manganese concretions; strongly acid; gradual smooth boundary.
Bw2—18 to 39 inches; strong brown (7.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; friable; few fine roots; many medium faint red (2.5YR 4/6) masses of oxidized iron; common medium prominent light brownish gray (10YR 6/2) iron depletions; many iron-manganese concretions; few mica flakes; many manganese concretions; strongly acid; gradual smooth boundary.
Bw3—39 to 49 inches; strong brown (7.5YR 5/6) silty clay loam; weak medium subangular blocky structure; friable; few fine roots; many medium distinct red (2.5YR 4/6) masses of oxidized iron; many medium prominent light brownish gray (10YR 6/2) iron depletions; many iron-manganese concretions; common mica flakes; many manganese concretions; moderately acid; gradual smooth boundary.
C—49 to 80 inches; strong brown (7.5YR 4/6) loamy sand; massive; friable; few medium prominent pale brown (10YR 6/3) iron depletions; common mica flakes; moderately acid.

Range in Characteristics

Thickness of the solum: 40 to more than 72 inches
Reaction: Very strongly acid to slightly acid
Other: Few to many flakes of mica and few to many concretions of manganese throughout the solum

A horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6
Texture—loam, silt loam, silty clay loam, clay loam, silty clay, or clay

Bw horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—silty clay, silty clay loam, clay loam, or clay
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

BC horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 3
Texture—loam, silty clay loam, clay loam, or sandy clay loam
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 6
Texture—variable
Redoximorphic features—common or many masses of oxidized iron in shades of red, yellow, or brown and few to many iron depletions in shades of gray

Uchee Series

Major land resource area: Southern Coastal Plain
Landform: Broad interstream divides
Parent material: Loamy marine deposits
Drainage class: Well drained
Permeability class: Moderately slow
Depth class: Very deep
Slope: 0 to 12 percent
Taxonomic classification: Loamy, kaolinitic, thermic Arenic Kanhapludults

Geographically Associated Soils

- Blanton soils, which have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are in the smoother, less sloping positions
- Cowarts soils, which are in positions similar to those of the Uchee soils and do not have sandy surface and subsurface layers with a combined thickness of 20 inches or more
- Fuquay soils, which contain more than 5 percent plinthite within a depth of 60 inches and are in the smoother, less sloping positions

Typical Pedon

Uchee sand, 0 to 5 percent slopes; northwest 1.6 miles on South Carolina Highway 125 from its intersection with South Carolina Secondary Highway 52, southwest on an unimproved road for 1.7 miles, northwest on a field road for 0.5 mile, 700 feet north of the field road; Allendale County, South Carolina; Martin, South Carolina, 7.5-minute topographic quadrangle; lat. 33 degrees 3 minutes 11 seconds N. and long. 81 degrees 24 minutes 8 seconds W.

Ap—0 to 6 inches; brown (10YR 4/3) sand; weak fine granular structure; very friable; many fine and many medium roots; few distinct clay films on all faces of peds; moderately acid; clear smooth boundary.

E1—6 to 14 inches; yellowish brown (10YR 5/6) sand; weak fine granular structure; very friable; many fine and many medium roots; moderately acid; gradual smooth boundary.

E2—14 to 27 inches; brownish yellow (10YR 6/6) sand; weak fine granular structure; very friable; few fine roots; strongly acid; gradual smooth boundary.

E3—27 to 35 inches; brownish yellow (10YR 6/6) loamy sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.

Bt—35 to 41 inches; brownish yellow (10YR 6/8) sandy clay loam; moderate medium subangular blocky structure; friable; very strongly acid; clear smooth boundary.

BC—41 to 53 inches; variegated strong brown (7.5YR 5/8), light gray (10YR 7/1), yellowish red (5YR 5/6), and brownish yellow (10YR 6/6) clay; massive; firm; strongly acid; gradual smooth boundary.

C—53 to 80 inches; variegated strong brown (7.5YR 5/8), light gray (10YR 7/1), yellowish red (5YR 5/6), and brownish yellow (10YR 6/6) sandy clay loam; massive; firm; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches

Reaction: Very strongly acid or strongly acid throughout, except where limed

Content of gravel: 0 to 35 percent in the A and E horizons and 0 to 15 percent in the B and C horizons

A or Ap horizon:

Color—hue of 10YR, value of 3 to 5, and chroma of 2 to 4

Texture—sand or loamy sand

E horizon:

Color—hue of 10YR, value of 4 to 6, and chroma of 3 to 6

Texture—sand or loamy sand

Bt horizon, upper part:

Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8

Texture—sandy loam or sandy clay loam

Bt horizon, lower part:

Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; or variegated in shades of brown, yellow, red, or gray

Texture—sandy loam or sandy clay loam
Other features—few to many mottles in shades of brown, yellow, red, or gray

BC horizon:
Color—hue of 5YR to 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—dominantly sandy loam, sandy clay loam, sandy clay, or clay but commonly has pockets or strata of coarser or finer textured material

C horizon:
Color—mottled in shades of red, yellow, brown, or gray
Texture—dominantly sandy loam or sandy clay loam but commonly has pockets or strata of coarser or finer textured material

2C horizon (where present):
Color—mottled in shades of white to red
Texture—dominantly loamy sand or sandy loam but commonly has streaks or strata of coarser and finer textured material

Formation of the Soils

This section describes the factors of soil formation and relates them to the soils in Screven County. It also discusses the processes of horizon differentiation.

Factors of Soil Formation

Soil characteristics are determined by the physical and mineral composition of the parent material; the climate under which the parent material accumulated and has existed since accumulation; the plant and animal life on and in the soil; the relief, or lay of the land; and the length of time that the forces of soil formation have acted on the soil material. All of these factors influence every soil, but the significance of each factor varies from place to place. One factor may dominate soil formation in one area, but another factor may dominate another area.

The interrelationships among these five factors are complex, and the effects of any one factor cannot be isolated and completely evaluated. It is convenient, however, to describe each factor separately and to indicate the probable effects of each.

Parent Material

Parent material is the unconsolidated mass in which a soil forms. The chemical and mineralogical composition of the soil is derived largely from the parent material. The soils of Screven County formed primarily in sandy and loamy marine sediments (Georgia DNR, 1976). Cowarts, Dothan, Fuquay, and Nankin soils are the main soils that formed in this material and are found in the uplands of the Coastal {lain. These soils are in primarily in gently sloping, upland positions. The Cowarts and Nankin soils tend to dominate the steeper slopes of the uplands. The Cowarts, Dothan, and Fuquay soils have a brownish, loamy subsoil containing iron concentrations in the middle and lower parts. Nodules of ironstone are present in the surface layer and upper parts of these soils. The Cowarts soils have a brownish, loamy subsoil that is mottled in the lower part and have mottled, loamy material that is hard and firm in the underlying layer. The Nankin soils have a brownish, sandy surface layer; a reddish brown, clayey subsoil; and iron concentrations and depletions below a depth of 42 inches. Gritney soils are in the slightly lower landscape positions and are more poorly drained than the Nankin soils. The Gritney soils have a seasonal high water table at a depth of 18 to 36 inches. Uchee and Lakeland soils are in landscape positions similar to those of the Dothan and Fuquay soils but are of lesser extent. The Uchee soils have a brownish, sandy surface layer; a thick, sandy subsurface layer; and a brownish, loamy subsoil containing mottles in the lower part and strata of coarser and finer materials. The Lakeland soils consist of very thick, yellowish, sandy material that overlies a brownish, sandy subsoil.

Stream alluvium is adjacent to all the streams in Screven County. The soils that formed in this alluvium formed in more recent sediments than the soils that formed in the uplands. The nearly level, poorly drained Herod and Muckalee soils are the main soils on the flood plains along Brier Creek, Beaverdam Creek, Horsepen Creek, and Buck Creek. The Herod soils are fine-loamy, having a clay content of greater than

18 percent from a depth of 10 to 40 inches. The Muckalee soils are coarse-loamy, containing less clay and more sandy materials than the Herod soils. Chastain and Tawcaw soils are the main soils on the flood plains along the Savannah River and the Ogeechee River. Chastain and Tawcaw soils are mostly grayish throughout. They formed in silty and clayey alluvium and thus have a clayey subsoil. Bladen and Eulonia soils are on stream terraces along these large creeks and rivers. Both soils formed in clayey fluviomarine sediments.

Plants and Animals

The effects of plants, animals, and other organisms on soil formation are significant. Plants and animals increase the content of organic matter and nitrogen in soil, increase or decrease the content of plant nutrients, and change soil structure and porosity.

Plants recycle nutrients, add organic matter to soil, and provide food and cover for animals. They stabilize the surface layer so that the soil-forming processes can continue. They also provide a more stable environment for the soil-forming processes by protecting the soils from extremes in temperature. The soils in the survey area formed under a succession of briers, brambles, and woody plants that were dominated by pines and hardwoods. Longleaf pines eventually suppressed most other plants in the area and became the predominant plant in the climax plant community.

Animals rearrange soil material by making the surface rough, by forming and filling channels, and by shaping peds and voids. The soil is mixed by ants, wasps, worms, and spiders, which make channels; by crustaceans, such as crayfish; and by turtles and foxes, which dig burrows. Humans affect the soil-forming process by tilling crops, removing natural vegetation, establishing different plants, and reducing or increasing soil fertility. Bacteria, fungi, and other microorganisms hasten the decomposition of organic matter and increase the rate at which nutrients are released for plant growth.

The net gains and losses caused by plants and animals are important in the survey area. Within the relatively small confines of the survey area, however, one soil is not significantly different from another because of the effects of plants and animals.

Climate

The present climate of the survey area is probably similar to the climate that existed when the soils formed. The relatively large amount of rainfall and the warm temperatures contribute to rapid soil formation. Rainfall and temperature are the two most important climatic features that relate to soil properties.

Water from precipitation is essential in the formation of soil. Water dissolves soluble materials and is used by plants and animals. It transports material from one part of the soil to another part and from one area of the landscape to another area.

The soils in the survey area formed under a thermic temperature regime. In a thermic temperature regime, the mean soil temperature at a depth of 20 inches is 59 to 72 degrees F. Based on the mean annual air temperature, the estimated mean annual soil temperature in the survey area is 66 degrees F at a depth of 20 inches. The rate of chemical reactions and other processes in the soil depends to some extent on temperature. In addition, temperature affects the type and quality of vegetation, the amount and kind of organic matter, and the rate at which the organic matter decomposes.

Relief

Relief is the elevations or inequalities of a land surface considered collectively. The color of the soil, the degree of wetness, the thickness of the A horizon, the content of organic matter, and the plant cover are commonly related to relief.

In the survey area, the most obvious effects of relief are those that relate to soil color and to degree of soil wetness. Pelham and Rains soils have dominantly gray colors in the subsoil, whereas Dothan and Fuquay soils have a yellowish brown subsoil. The differences in color result from differences in relief and corresponding differences in internal drainage. Because the Fuquay and Dothan soils are in the higher positions on the landscape and are better drained than the Pelham and Rains soils, the Dothan and Fuquay soils are better oxidized and have a browner subsoil.

The movement of water across the surface and through the soil is controlled mostly by relief. Water flowing across the surface commonly carries solid particles and causes erosion or deposition, depending on the kind of relief. In the sloping areas, the soils are drier because more water runs off and less water penetrates the surface. The soils in low-lying areas are commonly wetter because they receive the water that flows off and through the soils in the higher positions on the landscape.

Time

The length of time that the soil-forming processes have acted on the parent material helps to determine the characteristics of the soil. Determinations of when soil formation began in the survey area are not exact. Most of the soils, however, are considered mature.

Mature soils are in equilibrium with the environment. They are characterized by pedogenic horizons that are readily recognizable and a carbon content that decreases regularly as depth increases. Some areas of the Dothan soils are on stable landscapes where the soil-forming processes have been active for thousands of years. These mature soils have a solum that is highly weathered and a zone of illuviation that is well expressed.

Herod and Muckalee soils are young soils. They receive sediment annually from floodwater. They are stratified and are not old enough to have a zone of illuviation. They do not have pedogenic horizons and are characterized by a carbon content that decreases irregularly as depth increases.

Processes of Horizon Differentiation

One or more soil-forming processes are involved in the formation of soil horizons. These processes are the accumulation of organic matter; the chemical weathering, mainly by hydrolysis, of primary minerals into silicate clay minerals; the translocation of silicate clay and some silt-sized particles from one horizon to another; and the reduction and transfer of iron.

These processes have been active in the formation of most of the soils in the survey area. The interaction of the first four processes is indicated by the strongly expressed horizons in Dothan and Fuquay soils. All five processes have probably been active in the formation of the moderately well drained Stilson soils and the somewhat poorly drained Leefield soils.

Some organic matter has accumulated in all of the soils in the survey area. Most of the soils contain moderately low amounts of organic matter in the surface layer. The content of organic matter in the surface layer ranges from low, as in Blanton soils, to high, as in Croatan soils.

The translocation of clay minerals is an important process in the development of many soils in the survey area. As clay minerals are removed from the A horizon, they accumulate as clay films on the faces of peds, in pores, and in root channels in the B horizon.

As silicate clay forms from primary minerals, some iron is commonly released as hydrated oxides. These oxides are generally red. Even in small amounts, they give the soil material a brownish color. They are largely responsible for the strong brown,

yellowish brown, or brownish yellow colors that are dominant in the subsoil of many soils in the survey area.

The reduction and transfer of iron has occurred in all of the soils that are not characterized by good natural drainage. This process, known as gleying, is evidenced by a gray matrix color and by iron or clay depletions. Some of the iron may be reoxidized and segregated and thus form yellow, brown, red, or other brightly colored masses of iron accumulation in an essentially gray matrix in the subsoil. Nodules or concretions of iron ore or manganese also commonly form as a result of this process. Soil features associated with chemically reduced iron are referred to as redoximorphic features (Vepraskas, 1992).

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

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.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

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.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bottom land. An informal term loosely applied to various portions of a flood plain.

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.

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.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

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.

COLE (coefficient of linear extensibility). See Linear extensibility.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conservation 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.”

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 survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

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.

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.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained,*

somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

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.

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.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

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*.

Fine textured soil. Sandy clay, silty clay, or clay.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

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.

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.

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.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

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.

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.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Sprinkler irrigation consists of water sprayed over the soil surface through pipes or nozzles from a pressure system.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

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 strength. The soil is not strong enough to support loads.

Masses. See Redoximorphic features.

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.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

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. See Redoximorphic features.

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

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.

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

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

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.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential 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.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (K_{sat}). See Permeability.

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.

Series, soil. A group of soils that have profiles that are almost alike. All the soils of a given series have horizons that are similar in composition, thickness, and arrangement.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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.

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.

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
Sloping	8 to 12 percent
Strongly sloping	12 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 40 percent
Very steep	40 percent and higher

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

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).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

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 (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

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."

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Tables

Table 1.--Temperature and Precipitation

[Recorded in the period 1971-1992 at Newington, Georgia]

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temp. higher than--	Minimum temp. 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-----	59.0	37.9	48.4	79	13	104	4.69	2.66	6.65	6	0.3
February----	63.9	40.7	52.3	83	17	146	3.76	1.80	5.79	4	0.5
March-------	71.2	47.4	59.3	87	24	301	4.49	2.38	6.31	6	0.1
April-------	78.3	53.0	65.7	93	33	465	2.82	0.88	4.77	4	0.0
May---------	84.5	61.6	73.0	97	44	713	4.03	1.43	6.51	6	0.0
June--------	89.6	68.9	79.2	99	56	877	5.50	3.72	7.07	6	0.0
July--------	92.8	72.5	82.6	104	48	961	5.55	2.32	8.62	7	0.0
August------	90.5	71.7	81.1	101	60	942	5.70	2.61	8.87	7	0.0
September---	86.1	66.6	76.4	97	38	771	4.28	0.99	7.03	5	0.0
October-----	78.0	55.4	66.7	92	33	505	2.02	0.49	3.07	3	0.0
November----	70.1	46.9	58.5	85	24	272	2.68	0.94	4.31	3	0.0
December----	62.6	40.5	51.6	81	16	145	3.65	1.65	5.64	4	0.2
Yearly:											
Average---	77.2	55.2	66.2	---	---	---	---	---	---	---	---
Extreme---	110	-1	---	104	10	---	---	---	---	---	---
Total-----	---	---	---	---	---	6,200	49.18	36.17	51.33	61	1.2

* 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 1971-1992 at Newington, Georgia]

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--	Feb. 25	Mar. 2	Apr. 16
2 years in 10 later than--	Feb. 18	Feb. 26	Apr. 8
5 years in 10 later than--	Feb. 6	Feb. 16	Mar. 23
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 2	Oct. 23	Oct. 19
2 years in 10 earlier than--	Nov. 15	Oct. 31	Oct. 26
5 years in 10 earlier than--	Dec. 8	Nov. 16	Nov. 8

Table 3.--Growing Season

[Recorded in the period 1971-1992 at Newington, Georgia]

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	276	256	210
8 years in 10	288	263	219
5 years in 10	310	275	237
2 years in 10	332	288	255
1 year in 10	344	295	264

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AbA	Albany loamy sand, 0 to 2 percent slopes	1,560	0.4
BdA	Bladen fine sandy loam, 0 to 2 percent slopes, occasionally flooded	19,430	4.6
BeB	Blanton sand, 0 to 5 percent slopes	22,100	5.3
BfB	Blanton-Foxworth complex, 0 to 5 percent slopes	9,965	2.4
CAA	Chastain and Tawcaw soils, 0 to 2 percent slopes, frequently flooded	27,335	6.5
ChA	Chipley sand, 0 to 2 percent slopes	1,645	0.4
CnA	Clarendon loamy sand, 0 to 2 percent slopes	3,845	0.9
CoB	Cowarts loamy sand, 2 to 5 percent slopes	18,180	4.3
CtB	Cowarts-Gritney-Urban land complex, 2 to 5 percent slopes	1,235	0.3
CuD	Cowarts-Uchee-Blanton complex, 8 to 12 percent slopes	2,540	0.6
DcA	Dothan-Clarendon complex, 0 to 2 percent slopes	70	*
DnA	Dothan-Norfolk complex, 0 to 2 percent slopes	12,885	3.1
DnB	Dothan-Norfolk complex, 2 to 5 percent slopes	55,150	13.2
EuA	Eulonia sandy loam, 0 to 3 percent slopes	11,820	2.8
FoA	Foxworth sand, 0 to 2 percent slopes	3,590	0.9
FuA	Fuquay loamy sand, 0 to 2 percent slopes	54,150	12.9
GCA	Grady and Croatan soils, 0 to 2 percent slopes, ponded	12,855	3.1
GrB	Gritney loamy sand, 2 to 5 percent slopes	7,565	1.8
HMA	Herod and Muckalee loams, 0 to 2 percent slopes, frequently flooded	14,760	3.5
KBA	Kinston and Bibb soils, 0 to 2 percent slopes, frequently flooded	15,010	3.6
LaC	Lakeland sand, 1 to 8 percent slopes	2,025	0.5
LeA	Leefield loamy sand, 0 to 2 percent slopes	3,900	0.9
MeB	Meldrim sand, 0 to 5 percent slopes	915	0.2
NaB	Nankin loamy sand, 2 to 5 percent slopes	10,805	2.6
NcC2	Nankin-Cowarts complex, 5 to 8 percent slopes, eroded	20,645	4.9
OcA	Ocilla loamy sand, 0 to 2 percent slopes	6,080	1.5
PeA	Pelham loamy sand, 0 to 2 percent slopes	24,095	5.7
PkA	Pickney mucky sand, 0 to 1 percent slopes, frequently flooded	3,065	0.7
RaA	Rains loamy sand, 0 to 2 percent slopes	15,370	3.7
RbF	Remlik-Blanton complex, 15 to 60 percent slopes	1,190	0.3
RgA	Rigdon sand, 0 to 2 percent slopes	5	*
StA	Stilson loamy sand, 0 to 2 percent slopes	4,085	1.0
SuA	Surrency mucky sand, 0 to 1 percent slopes, frequently flooded	14,370	3.4
UaB	Uchee sand, 0 to 5 percent slopes	2,205	0.5
UbC	Uchee-Blanton complex, 5 to 8 percent slopes	8,735	2.1
UrB	Udorthents, loamy, 0 to 6 percent slopes	815	0.2
W	Water	5,205	1.2
	Total	419,200	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	Improved bermudagrass	Peanuts	Soybeans
		Bu	*Lbs*	*AUM*	*Lbs*	*Bu*
AbA:						
Albany	3w	65	400	8	1,700	25
BdA:						
Bladen	6w	---	---	---	---	---
BeB:						
Blanton	3s	55	450	8	2,200	25
BfB:						
Blanton	3s	55	450	8	2,000	20
Foxworth	3s	55	400	7	1,400	20
CAA:						
Chastain	7w	---	---	---	---	---
Tawcaw	6w	---	---	---	---	---
ChA:						
Chipley	3s	55	400	8	1,800	20
CnA:						
Clarendon	2w	125	700	10.5	3,000	45
CoB:						
Cowarts	2e	80	650	8	2,400	35
CtB:						
Cowarts	2e	80	650	8	2,400	35
Gritney	2e	90	600	6	3,000	28
Urban land	8s	---	---	---	---	---
CuD:						
Cowarts	6e	---	---	7	---	---
Uchee	6s	---	---	7	---	---
Blanton	6s	---	---	7	---	---
DcA:						
Dothan	1	120	900	10.5	3,800	40
Clarendon	2w	125	700	10.5	3,000	45
DnA:						
Dothan	1	120	900	10.5	3,800	40
Norfolk	1	110	700	10	4,000	40
DnB:						
Dothan	2e	120	900	10.5	3,600	35
Norfolk	2e	100	650	10	3,700	35
EuA:						
Eulonia	2w	100	750	9	3,000	35

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Improved bermudagrass	Peanuts	Soybeans
		Bu	*Lbs*	*AUM*	*Lbs*	*Bu*
FoA:						
Foxworth	3s	55	400	7	1,400	20
FuA:						
Fuquay	2s	85	650	8	2,900	30
GCA:						
Grady	5w	---	---	---	---	---
Croatan	7w	---	---	---	---	---
GrB:						
Gritney	2e	90	600	6	3,000	28
HMA:						
Herod	5w	---	---	---	---	---
Muckalee	5w	---	---	---	---	---
KBA:						
Kinston	6w	---	---	---	---	---
Bibb	5w	---	---	---	---	---
LaC:						
Lakeland	4s	55	450	7	2,000	20
LeA:						
Leefield	3w	85	450	8.5	2,000	40
MeB:						
Meldrim	3s	60	500	8	2,200	25
NaB:						
Nankin	2e	75	600	9	2,200	30
NcC2:						
Nankin	4e	50	450	6	1,400	20
Cowarts	4e	60	500	7	1,600	20
OcA:						
Ocilla	3w	75	---	8.5	2,200	35
PeA:						
Pelham	5w	---	---	---	---	---
PkA:						
Pickney	7w	---	---	---	---	---
RaA:						
Rains	5w	---	---	---	---	---
RbF:						
Remlik	6e	---	---	---	---	---
Blanton	6s	---	---	---	---	---
RgA:						
Rigdon	3w	70	450	8	1,800	30
StA:						
Stilson	2w	100	700	10	3,100	35

Table 5.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Improved bermudagrass	Peanuts	Soybeans
		Bu	*Lbs*	*AUM*	*Lbs*	*Bu*
SuA:						
Surrency	6w	---	---	---	---	---
UaB:						
Uchee	2s	70	550	8.5	3,000	28
UbC:						
Uchee	3s	65	500	8	2,500	25
Blanton	4s	50	---	7	2,000	23
UrB:						
Udorthents.						
W:						
Water.						

Table 6.--Prime Farmland and Farmland of Statewide Importance

[Only the soils considered prime farmland or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland or important farmland]

Map symbol	Map unit name	Farmland Classification
CnA	Clarendon loamy sand, 0 to 2 percent slopes	All areas are prime farmland
CoB	Cowarts loamy sand, 2 to 5 percent slopes	All areas are prime farmland
DcA	Dothan-Clarendon complex, 0 to 2 percent slopes	All areas are prime farmland
DnA	Dothan-Norfolk complex, 0 to 2 percent slopes	All areas are prime farmland
DnB	Dothan-Norfolk complex, 2 to 5 percent slopes	All areas are prime farmland
EuA	Eulonia sandy loam, 0 to 3 percent slopes	All areas are prime farmland
FuA	Fuquay loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
GrB	Gritney loamy sand, 2 to 5 percent slopes	All areas are prime farmland
LeA	Leefield loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
NaB	Nankin loamy sand, 2 to 5 percent slopes	All areas are prime farmland
NcC2	Nankin-Cowarts complex, 5 to 8 percent slopes, eroded	Farmland of statewide importance
OcA	Ocilla loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
RgA	Rigdon sand, 0 to 2 percent slopes	Farmland of statewide importance
StA	Stilson loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
UaB	Uchee sand, 0 to 5 percent slopes	Farmland of statewide importance

Table 7.--Forestland Productivity

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation]

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
AbA:				
Albany	Loblolly pine	95	143	Loblolly pine, slash pine
	Longleaf pine	80	100	
	Slash pine	85	157	
BdA:				
Bladen	Loblolly pine	94	143	Loblolly pine, longleaf pine
	Sweetgum	90	100	
BeB:				
Blanton	Longleaf pine	70	86	Loblolly pine, longleaf pine
	Loblolly pine	85	114	
	Southern red oak	---	---	
	Bluejack oak	---	---	
	Turkey oak	---	---	
	Live oak	---	---	
BfB:				
Blanton	Longleaf pine	70	86	Loblolly pine, longleaf pine
	Loblolly pine	85	114	
	Southern red oak	---	---	
	Bluejack oak	---	---	
	Turkey oak	---	---	
	Live oak	---	---	
Foxworth	Bluejack oak	---	---	Longleaf pine, sand pine
	Laurel oak	---	---	
	Live oak	---	---	
	Longleaf pine	65	72	
	Post oak	---	---	
	Slash pine	80	143	
	Turkey oak	---	---	
CAA:				
Chastain	Sweetgum	95	122	Eastern cottonwood, sweetgum, yellow-poplar
	Baldcypress	---	---	
	Water tupelo	---	---	
	Water oak	---	---	
Tawcaw	Sweetgum	95	114	Eastern cottonwood, sweetgum, yellow-poplar
	Water oak	---	---	
	Water tupelo	---	---	
ChA:				
Chipley	Blackjack oak	90	---	Longleaf pine, slash pine
	Loblolly pine	90	---	
	Longleaf pine	80	---	
	Post oak	---	---	
	Turkey oak	---	---	
CnA:				
Clarendon	Hickory	---	---	Loblolly pine, longleaf pine, slash pine
	Loblolly pine	88	129	
	Longleaf pine	84	114	
	Slash pine	92	172	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
CoB:				
Cowarts	Loblolly pine	86	129	Loblolly pine,
	Longleaf pine	67	72	longleaf pine
CtB:				
Cowarts	Loblolly pine	86	129	Loblolly pine,
	Longleaf pine	67	72	longleaf pine
Gritney	Loblolly pine	85	114	Loblolly pine
	Southern red oak	---	---	
	Sweetgum	---	---	
	White oak	---	---	
	Yellow poplar	---	---	
Urban land.				
CuD:				
Cowarts	Loblolly pine	86	129	Loblolly pine,
	Longleaf pine	67	72	longleaf pine
Uchee	Loblolly pine	80	114	Loblolly pine,
	Longleaf pine	67	72	longleaf pine
Blanton	Longleaf pine	70	86	Loblolly pine,
	Loblolly pine	85	114	longleaf pine
	Southern red oak	---	---	
	Bluejack oak	---	---	
	Turkey oak	---	---	
	Live oak	---	---	
DcA:				
Dothan	Hickory	---	---	Loblolly pine,
	Loblolly pine	88	129	longleaf pine,
	Longleaf pine	84	114	slash pine
	Slash pine	92	172	
	Water oak	---	---	
Clarendon	Hickory	---	---	Loblolly pine,
	Loblolly pine	88	129	longleaf pine,
	Longleaf pine	84	114	slash pine
	Slash pine	92	172	
DnA:				
Dothan	Hickory	---	---	Loblolly pine,
	Loblolly pine	88	129	longleaf pine,
	Longleaf pine	84	114	slash pine
	Slash pine	92	172	
	Water oak	---	---	
Norfolk	Loblolly pine	84	114	Loblolly pine,
	Longleaf pine	77	100	longleaf pine
DnB:				
Dothan	Hickory	---	---	Loblolly pine,
	Loblolly pine	88	129	longleaf pine,
	Longleaf pine	84	114	slash pine
	Slash pine	92	172	
	Water oak	---	---	
Norfolk	Loblolly pine	84	114	Loblolly pine,
	Longleaf pine	77	100	longleaf pine

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
EuA:				
Eulonia	Blackgum	---	---	Loblolly pine, slash pine
	Hickory	---	---	
	Loblolly pine	90	129	
	Longleaf pine	85	114	
	Southern red oak	---	---	
	Sweetgum	90	100	
	Water oak	90	86	
FoA:				
Foxworth	Bluejack oak	---	---	Longleaf pine, sand pine
	Laurel oak	---	---	
	Live oak	---	---	
	Longleaf pine	65	72	
	Post oak	---	---	
	Slash pine	80	143	
	Turkey oak	---	---	
FuA:				
Fuquay	Hickory	---	---	Loblolly pine, longleaf pine, slash pine
	Loblolly pine	88	129	
	Longleaf pine	84	114	
	Slash pine	92	172	
	Water oak	---	---	
GCA:				
Grady	Baldcypress	65	43	American sycamore, water tupelo
	Water oak	65	57	
	Water tupelo	68	86	
Croatan	Water tupelo	60	86	---
	Pond pine	55	29	
	Pondcypress	---	---	
	Baldcypress	---	---	
	Swamp tupelo	---	---	
	Red maple	---	---	
	Sweetbay	---	---	
	Loblolly bay	---	---	
GrB:				
Gritney	Loblolly pine	85	114	Loblolly pine
	Southern red oak	---	---	
	Sweetgum	---	---	
	White oak	---	---	
	Yellow poplar	---	---	
HMA:				
Herod	Eastern cottonwood	100	129	Eastern cottonwood, loblolly pine, slash pine, sweetgum
	Loblolly pine	100	129	
	Sweetgum	95	114	
	Water oak	90	86	
Muckalee	Eastern cottonwood	100	129	American sycamore, eastern cottonwood, loblolly pine, Nuttall's oak, sweetgum
	Green ash	85	57	
	Loblolly pine	90	129	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	90	86	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
KBA:				
Kinston	Cherrybark oak	95	72	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow poplar
	Eastern cottonwood	100	129	
	Loblolly pine	100	157	
	Sweetgum	95	114	
	White oak	90	72	
Bibb	Atlantic white cedar	---	---	Eastern cottonwood, loblolly pine, sweetgum, yellow poplar
	Blackgum	---	---	
	Loblolly pine	100	157	
	Sweetgum	90	100	
	Water oak	90	86	
	Yellow poplar	---	---	
LaC:				
Lakeland	Blackjack oak	---	---	Loblolly pine, longleaf pine, slash pine
	Loblolly pine	75	100	
	Longleaf pine	60	57	
	Post oak	---	---	
	Slash pine	75	129	
	Turkey oak	---	---	
LeA:				
Leefield	---	---	---	Loblolly pine, longleaf pine, slash pine
MeB:				
Meldrim	Bluejack oak	---	---	Loblolly pine, longleaf pine
	Live oak	---	---	
	Loblolly pine	85	114	
	Longleaf pine	70	86	
	Southern red oak	---	---	
	Turkey oak	---	---	
NaB:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
NcC2:				
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
	Slash pine	80	143	
Cowarts	Loblolly pine	86	129	Loblolly pine, longleaf pine
	Longleaf pine	67	72	
OcA:				
Ocilla	Loblolly pine	85	114	Loblolly pine, slash pine
	Longleaf pine	75	100	
	Slash pine	85	157	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
PeA:				
Pelham	Blackgum	80	114	Loblolly pine
	Loblolly pine	90	129	
	Longleaf pine	80	100	
	Sweetgum	80	86	
	Water oak	80	72	
PkA:				
Pickney	Baldcypress	---	---	Baldcypress,
	Blackgum	---	---	sweetgum, water
	Pond pine	---	---	tupelo
	Sweetgum	90	100	
	Water oak	---	---	
	Water tupelo	---	---	
	Yellow-poplar	---	---	
RaA:				
Rains	Loblolly pine	94	143	Loblolly pine
	Sweetgum	90	131	
RbF:				
Remlik	Longleaf pine	63	63	Longleaf pine,
	Loblolly pine	88	127	loblolly pine
	Blackjack oak	---	---	
Blanton	Longleaf pine	70	86	Loblolly pine,
	Loblolly pine	85	114	longleaf pine
	Southern red oak	---	---	
	Bluejack oak	---	---	
	Turkey oak	---	---	
	Live oak	---	---	
RgA:				
Rigdon	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	70	86	longleaf pine,
				slash pine
StA:				
Stilson	Loblolly pine	95	129	Loblolly pine,
	Longleaf pine	80	100	longleaf pine,
	Slash pine	95	172	slash pine
	Sweetgum	---	---	
SuA:				
Surrency	Blackgum	---	---	Loblolly pine
	Cypress	---	---	
	Loblolly pine	95	143	
	Sweetgum	90	100	
	Water oak	---	---	
	Water tupelo	---	---	
UaB:				
Uchee	Loblolly pine	80	114	Loblolly pine,
	Longleaf pine	67	72	longleaf pine

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			cu ft/ac	
UbC:				
Uchee	Loblolly pine	80	114	Loblolly pine, longleaf pine
	Longleaf pine	67	72	
Blanton	Longleaf pine	70	86	Loblolly pine, longleaf pine
	Loblolly pine	85	114	
	Southern red oak	---	---	
	Bluejack oak	---	---	
	Turkey oak	---	---	
	Live oak	---	---	
UrB:				
Udorthents.				
W:				
Water.				

Table 8a.--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 limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:						
Albany	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Wetness	0.50
BdA:						
Bladen	Well suited		Well suited		High Wetness	1.00
BeB:						
Blanton	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
BfB:						
Blanton	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
Foxworth	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
CAA:						
Chastain	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	High Wetness	1.00
Tawcaw	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	
ChA:						
Chipley	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
CnA:						
Clarendon	Well suited		Well suited		Low	
CoB:						
Cowarts	Well suited		Well suited		Low	
CtB:						
Cowarts	Well suited		Well suited		Low	
Gritney	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index	0.75	Low	
Urban land	Not rated		Not rated		Not rated	
CuD:						
Cowarts	Well suited		Moderately suited Slope	0.50	Low	
Uchee	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Low	
Blanton	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Low	

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DcA:						
Dothan	Well suited		Well suited		Low	
Clarendon	Well suited		Well suited		Low	
DnA:						
Dothan	Well suited		Well suited		Low	
Norfolk	Well suited		Well suited		Low	
DnB:						
Dothan	Well suited		Well suited		Low	
Norfolk	Well suited		Well suited		Low	
EuA:						
Eulonia	Well suited		Well suited		Low	
FoA:						
Foxworth	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
FuA:						
Fuquay	Well suited		Well suited		Low	
GCA:						
Grady	Poorly suited Wetness	0.75	Poorly suited Wetness	0.75	High Wetness	1.00
Croatan	Poorly suited Wetness	0.75	Poorly suited Wetness	0.75	High Wetness Soil reaction	1.00 1.00
GrB:						
Gritney	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index	0.75	Low	
HMA:						
Herod	Well suited		Well suited		High Wetness	1.00
Muckalee	Well suited		Well suited		High Wetness	1.00
KBA:						
Kinston	Well suited		Well suited		High Wetness	1.00
Bibb	Well suited		Well suited		High Wetness	1.00
LaC:						
Lakeland	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	
LeA:						
Leefield	Well suited		Well suited		Low	
MeB:						
Meldrim	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Low	

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NaB:						
Nankin	Well suited		Well suited		Low	
NcC2:						
Nankin	Well suited		Moderately suited		Low	
			Slope	0.50		
Cowarts	Moderately suited		Moderately suited		Low	
	Stickiness; high plasticity index	0.50	Slope	0.50		
			Stickiness; high plasticity index	0.50		
OcA:						
Ocilla	Well suited		Well suited		Low	
PeA:						
Pelham	Well suited		Well suited		High	
					Wetness	1.00
PkA:						
Pickney	Well suited		Well suited		High	
					Wetness	1.00
RaA:						
Rains	Well suited		Well suited		High	
					Wetness	1.00
RbF:						
Remlik	Moderately suited		Poorly suited		High	
	Sandiness	0.50	Slope	0.75	Available water	1.00
			Sandiness	0.50		
Blanton	Moderately suited		Poorly suited		Moderate	
	Sandiness	0.50	Slope	0.75	Available water	0.50
			Sandiness	0.50		
RgA:						
Rigdon	Moderately suited		Moderately suited		Low	
	Sandiness	0.50	Sandiness	0.50		
StA:						
Stilson	Well suited		Well suited		Low	
SuA:						
Surrency	Moderately suited		Poorly suited		High	
	Sandiness	0.50	Wetness	0.75	Wetness	1.00
	Wetness	0.50	Sandiness	0.50		
UaB:						
Uchee	Moderately suited		Moderately suited		Low	
	Sandiness	0.50	Sandiness	0.50		
UbC:						
Uchee	Moderately suited		Moderately suited		Low	
	Sandiness	0.50	Slope	0.50		
			Sandiness	0.50		
Blanton	Moderately suited		Moderately suited		Low	
	Sandiness	0.50	Slope	0.50		
			Sandiness	0.50		

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UrB:						
Udorthents	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 8b.--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 limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Slight		Moderately suited	
			Sandiness	0.50
			Wetness	0.50
BdA:				
Bladen	Slight		Poorly suited	
			Wetness	1.00
			Flooding	0.50
BeB:				
Blanton	Slight		Moderately suited	
			Sandiness	0.50
BfB:				
Blanton	Slight		Moderately suited	
			Sandiness	0.50
Foxworth	Slight		Moderately suited	
			Sandiness	0.50
CAA:				
Chastain	Slight		Poorly suited	
			Flooding	1.00
			Wetness	1.00
			Low strength	0.50
Tawcaw	Slight		Poorly suited	
			Flooding	1.00
			Low strength	0.50
			Wetness	0.50
ChA:				
Chipley	Slight		Moderately suited	
			Sandiness	0.50
CnA:				
Clarendon	Slight		Well suited	
CoB:				
Cowarts	Slight		Well suited	
CtB:				
Cowarts	Slight		Well suited	
Gritney	Slight		Moderately suited	
			Sandiness	0.50
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CuD:				
Uchee	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
			Sandiness	0.50
Blanton	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
			Sandiness	0.50
DcA:				
Dothan	Slight		Well suited	
Clarendon	Slight		Well suited	
DnA:				
Dothan	Slight		Well suited	
Norfolk	Slight		Well suited	
DnB:				
Dothan	Slight		Well suited	
Norfolk	Slight		Well suited	
EuA:				
Eulonia	Slight		Moderately suited	
			Wetness	0.50
FoA:				
Foxworth	Slight		Moderately suited	
			Sandiness	0.50
FuA:				
Fuquay	Slight		Well suited	
GCA:				
Grady	Slight		Poorly suited	
			Ponding	1.00
			Wetness	1.00
			Low strength	0.50
Croatan	Slight		Poorly suited	
			Low strength	1.00
			Ponding	1.00
			Wetness	1.00
GrB:				
Gritney	Slight		Moderately suited	
			Sandiness	0.50
HMA:				
Herod	Slight		Poorly suited	
			Flooding	1.00
			Wetness	1.00
			Low strength	0.50
Muckalee	Slight		Poorly suited	
			Flooding	1.00
			Wetness	1.00

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
KBA:				
Kinston	Slight		Poorly suited	
			Flooding	1.00
			Wetness	1.00
			Low strength	0.50
Bibb	Slight		Poorly suited	
			Flooding	1.00
			Wetness	1.00
			Low strength	0.50
LaC:				
Lakeland	Slight		Moderately suited	
			Sandiness	0.50
LeA:				
Leefield	Slight		Moderately suited	
			Wetness	0.50
MeB:				
Meldrim	Slight		Moderately suited	
			Sandiness	0.50
NaB:				
Nankin	Slight		Well suited	
NcC2:				
Nankin	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
Cowarts	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
OcA:				
Ocilla	Slight		Moderately suited	
			Wetness	0.50
PeA:				
Pelham	Slight		Poorly suited	
			Wetness	1.00
PkA:				
Pickney	Slight		Poorly suited	
			Ponding	1.00
			Flooding	1.00
			Wetness	1.00
RaA:				
Rains	Slight		Poorly suited	
			Wetness	1.00
RbF:				
Remlik	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
			Sandiness	0.50
Blanton	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
			Sandiness	0.50

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
RgA:				
Rigdon	Slight		Moderately suited	
			Sandiness	0.50
			Wetness	0.50
StA:				
Stilson	Slight		Well suited	
SuA:				
Surrency	Slight		Poorly suited	
			Ponding	1.00
			Flooding	1.00
			Wetness	1.00
			Sandiness	0.50
UaB:				
Uchee	Slight		Moderately suited	
			Sandiness	0.50
UbC:				
Uchee	Moderate		Moderately suited	
	Slope/erodibility	0.50	Sandiness	0.50
			Slope	0.50
Blanton	Moderate		Moderately suited	
	Slope/erodibility	0.50	Sandiness	0.50
			Slope	0.50
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 8c.--Forestland Management (Part 3)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Moderately suited Sandiness	0.50	Moderately suited Sandiness Wetness	0.50 0.50
BdA:				
Bladen	Well suited		Poorly suited Wetness Flooding	1.00 0.50
BeB:				
Blanton	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
BfB:				
Blanton	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Foxworth	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
CAA:				
Chastain	Moderately suited Low strength	0.50	Poorly suited Flooding Wetness Low strength	1.00 1.00 0.50
Tawcaw	Moderately suited Low strength	0.50	Poorly suited Flooding Low strength Wetness	1.00 0.50 0.50
ChA:				
Chipley	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
CnA:				
Clarendon	Well suited		Well suited	
CoB:				
Cowarts	Well suited		Well suited	
CtB:				
Cowarts	Well suited		Well suited	
Gritney	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Well suited		Moderately suited Slope	0.50

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CuD:				
Uchee	Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50
			Sandiness	0.50
Blanton	Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50
			Sandiness	0.50
DcA:				
Dothan	Well suited		Well suited	
Clarendon	Well suited		Well suited	
DnA:				
Dothan	Well suited		Well suited	
Norfolk	Well suited		Well suited	
DnB:				
Dothan	Well suited		Well suited	
Norfolk	Well suited		Well suited	
EuA:				
Eulonia	Well suited		Moderately suited	
			Wetness	0.50
FoA:				
Foxworth	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
FuA:				
Fuquay	Well suited		Well suited	
GCA:				
Grady	Poorly suited		Poorly suited	
	Wetness	0.75	Ponding	1.00
	Low strength	0.50	Wetness	1.00
			Low strength	0.50
Croatan	Poorly suited		Poorly suited	
	Low strength	1.00	Low strength	1.00
	Wetness	1.00	Ponding	1.00
			Wetness	1.00
GrB:				
Gritney	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
HMA:				
Herod	Moderately suited		Poorly suited	
	Low strength	0.50	Flooding	1.00
			Wetness	1.00
			Low strength	0.50
Muckalee	Well suited		Poorly suited	
			Flooding	1.00
			Wetness	1.00

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
KBA:				
Kinston	Moderately suited		Poorly suited	
	Low strength	0.50	Flooding	1.00
			Wetness	1.00
			Low strength	0.50
Bibb	Moderately suited		Poorly suited	
	Low strength	0.50	Flooding	1.00
			Wetness	1.00
			Low strength	0.50
LaC:				
Lakeland	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
LeA:				
Leefield	Well suited		Moderately suited	
			Wetness	0.50
MeB:				
Meldrim	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
NaB:				
Nankin	Well suited		Well suited	
NcC2:				
Nankin	Well suited		Moderately suited	
			Slope	0.50
Cowarts	Well suited		Moderately suited	
			Slope	0.50
OcA:				
Ocilla	Well suited		Moderately suited	
			Wetness	0.50
PeA:				
Pelham	Well suited		Poorly suited	
			Wetness	1.00
PkA:				
Pickney	Well suited		Poorly suited	
			Ponding	1.00
			Flooding	1.00
			Wetness	1.00
RaA:				
Rains	Well suited		Poorly suited	
			Wetness	1.00
RbF:				
Remlik	Moderately suited		Poorly suited	
	Slope	0.50	Slope	1.00
	Sandiness	0.50	Sandiness	0.50
Blanton	Moderately suited		Poorly suited	
	Slope	0.50	Slope	1.00
	Sandiness	0.50	Sandiness	0.50

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
RgA:				
Rigdon	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
			Wetness	0.50
StA:				
Stilson	Well suited		Well suited	
SuA:				
Surrency	Poorly suited		Poorly suited	
	Wetness	1.00	Ponding	1.00
	Sandiness	0.50	Flooding	1.00
			Wetness	1.00
			Sandiness	0.50
UaB:				
Uchee	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
UbC:				
Uchee	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
			Slope	0.50
Blanton	Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50
			Slope	0.50
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 9a.--Recreational 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	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.69	Too sandy	0.69
BdA:				
Bladen	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.96
	Slow water movement	0.96		
BeB:				
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
BfB:				
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
Foxworth	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
CAA:				
Chastain	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Slow water movement	0.94
	Slow water movement	0.94	Flooding	0.40
Tawcaw	Very limited		Somewhat limited	
	Flooding	1.00	Slow water movement	0.94
	Depth to saturated zone	0.98	Depth to saturated zone	0.75
	Slow water movement	0.94	Flooding	0.40
ChA:				
Chipley	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Depth to saturated zone	0.39	Depth to saturated zone	0.19
CnA:				
Clarendon	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60
	Depth to saturated zone	0.39	Depth to saturated zone	0.19
CoB:				
Cowarts	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60
CtB:				
Cowarts	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CtB:				
Gritney	Somewhat limited		Somewhat limited	
	Slow water movement	0.96	Slow water movement	0.96
	Depth to saturated zone	0.07	Depth to saturated zone	0.03
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60
	Slope	0.16	Slope	0.16
Uchee	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Slope	0.16	Slope	0.16
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Slope	0.16	Slope	0.16
DcA:				
Dothan	Not limited		Not limited	
Clarendon	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60
	Depth to saturated zone	0.39	Depth to saturated zone	0.19
DnA:				
Dothan	Not limited		Not limited	
Norfolk	Not limited		Not limited	
DnB:				
Dothan	Not limited		Not limited	
Norfolk	Not limited		Not limited	
EuA:				
Eulonia	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75
	Slow water movement	0.26	Slow water movement	0.26
FoA:				
Foxworth	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
FuA:				
Fuquay	Somewhat limited		Somewhat limited	
	Too sandy	0.60	Too sandy	0.60
GCA:				
Grady	Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Slow water movement	0.96	Slow water movement	0.96

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GCA:				
Croatan	Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00
	Too acid	1.00	Too acid	1.00
GrB:				
Gritney	Somewhat limited		Somewhat limited	
	Slow water movement	0.96	Slow water movement	0.96
	Depth to saturated zone	0.07	Depth to saturated zone	0.03
HMA:				
Herod	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
Muckalee	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
KBA:				
Kinston	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
Bibb	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
LaC:				
Lakeland	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
LeA:				
Leefield	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.90	Too sandy	0.80
	Too sandy	0.80	Depth to saturated zone	0.60
	Slow water movement	0.15	Slow water movement	0.15
MeB:				
Meldrim	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
NaB:				
Nankin	Somewhat limited		Somewhat limited	
	Slow water movement	0.26	Slow water movement	0.26
NcC2:				
Nankin	Somewhat limited		Somewhat limited	
	Slow water movement	0.26	Slow water movement	0.26
Cowarts	Somewhat limited		Somewhat limited	
	Slow water movement	0.60	Slow water movement	0.60

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
OcA:				
Ocilla	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.81	Too sandy	0.80
	Too sandy	0.80	Depth to saturated zone	0.48
PeA:				
Pelham	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.76	Too sandy	0.76
PkA:				
Pickney	Very limited		Very limited	
	Depth to saturated zone	1.00	Too sandy	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Too sandy	1.00	Flooding	0.40
RaA:				
Rains	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RbF:				
Remlik	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too sandy	0.79	Too sandy	0.79
Blanton	Very limited		Very limited	
	Slope	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00
RgA:				
Rigdon	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	0.75
StA:				
Stilson	Somewhat limited		Somewhat limited	
	Too sandy	0.60	Too sandy	0.60
	Slow water movement	0.15	Slow water movement	0.15
SuA:				
Surrency	Very limited		Very limited	
	Depth to saturated zone	1.00	Too sandy	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Too sandy	1.00	Flooding	0.40
	Slow water movement	0.26	Slow water movement	0.26
UaB:				
Uchee	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
UbC:				
Uchee	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 9b.--Recreational 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	Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.69	Too sandy	0.69
BdA:				
Bladen	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.96		
	Flooding	0.60		
BeB:				
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
BfB:				
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
Foxworth	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
CAA:				
Chastain	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
	Slow water movement	0.94		
Tawcaw	Very limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.44
	Depth to saturated zone	0.98	Flooding	0.40
	Slow water movement	0.94		
ChA:				
Chipley	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Depth to saturated zone	0.39		
CnA:				
Clarendon	Somewhat limited		Not limited	
	Slow water movement	0.60		
	Depth to saturated zone	0.39		
CoB:				
Cowarts	Somewhat limited		Not limited	
	Slow water movement	0.60		
	Slope	0.12		

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CtB:				
Cowarts	Somewhat limited		Not limited	
	Slow water movement	0.60		
	Slope	0.12		
Gritney	Somewhat limited		Not limited	
	Slow water movement	0.96		
	Slope	0.12		
	Depth to saturated zone	0.07		
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Very limited		Not limited	
	Slope	1.00		
	Slow water movement	0.60		
Uchee	Very limited		Very limited	
	Slope	1.00	Too sandy	1.00
	Too sandy	1.00		
	Gravel	0.22		
Blanton	Very limited		Very limited	
	Slope	1.00	Too sandy	1.00
	Too sandy	1.00		
DcA:				
Dothan	Not limited		Not limited	
Clarendon	Somewhat limited		Not limited	
	Slow water movement	0.60		
	Depth to saturated zone	0.39		
DnA:				
Dothan	Not limited		Not limited	
Norfolk	Not limited		Not limited	
DnB:				
Dothan	Somewhat limited		Not limited	
	Slope	0.12		
Norfolk	Somewhat limited		Not limited	
	Slope	0.12		
EuA:				
Eulonia	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.44
	Slow water movement	0.26		
FoA:				
Foxworth	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
FuA:				
Fuquay	Somewhat limited		Somewhat limited	
	Too sandy	0.60	Too sandy	0.60

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GCA:				
Grady	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Slow water movement	0.96		
Croatan	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00	Organic matter content	1.00
	Ponding	1.00	Ponding	1.00
	Too acid	1.00		
GrB:				
Gritney	Somewhat limited		Not limited	
	Slow water movement	0.96		
	Slope	0.12		
	Depth to saturated zone	0.07		
HMA:				
Herod	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
Muckalee	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
KBA:				
Kinston	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
Bibb	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40
LaC:				
Lakeland	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Slope	0.50		
LeA:				
Leefield	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.90	Too sandy	0.80
	Too sandy	0.80	Depth to saturated zone	0.22
	Slow water movement	0.15		
MeB:				
Meldrim	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value
NaB:				
Nankin	Somewhat limited		Not limited	
	Slow water movement	0.26		
	Slope	0.12		
NcC2:				
Nankin	Very limited		Not limited	
	Slope	1.00		
	Slow water movement	0.26		
Cowarts	Very limited		Not limited	
	Slope	1.00		
	Slow water movement	0.60		
OcA:				
Ocilla	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.81	Too sandy	0.80
	Too sandy	0.80	Depth to saturated zone	0.11
PeA:				
Pelham	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.76	Too sandy	0.76
PkA:				
Pickney	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	1.00	Too sandy	1.00
	Flooding	1.00	Flooding	0.40
RaA:				
Rains	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RbF:				
Remlik	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too sandy	0.79	Too sandy	0.79
	Gravel	0.06		
Blanton	Very limited		Very limited	
	Slope	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00
RgA:				
Rigdon	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	0.44
StA:				
Stilson	Somewhat limited		Somewhat limited	
	Too sandy	0.60	Too sandy	0.60
	Slow water movement	0.15		

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails	
	Rating class and limiting features	Value	Rating class and limiting features	Value
SuA:				
Surrency	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	1.00	Too sandy	1.00
	Flooding	1.00	Flooding	0.40
	Slow water movement	0.26		
UaB:				
Uchee	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Gravel	0.22		
	Slope	0.12		
UbC:				
Uchee	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Slope	1.00		
	Gravel	0.22		
Blanton	Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00
	Slope	1.00		
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 10a.--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	Dwellings without basements		Dwellings with basements	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BdA:				
Bladen	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50
BeB:				
Blanton	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
BfB:				
Blanton	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
Foxworth	Not limited		Somewhat limited	
			Depth to saturated zone	0.61
CAA:				
Chastain	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50
Tawcaw	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.98	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50
ChA:				
Chipley	Somewhat limited		Very limited	
	Depth to saturated zone	0.39	Depth to saturated zone	1.00
CnA:				
Clarendon	Somewhat limited		Very limited	
	Depth to saturated zone	0.39	Depth to saturated zone	1.00
CoB:				
Cowarts	Not limited		Not limited	
CtB:				
Cowarts	Not limited		Not limited	

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CtB:				
Gritney	Somewhat limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00
	Depth to saturated zone	0.07	Shrink-swell	0.50
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Somewhat limited		Somewhat limited	
	Slope	0.16	Slope	0.16
Uchee	Somewhat limited		Somewhat limited	
	Slope	0.16	Depth to saturated zone	0.47
			Slope	0.16
Blanton	Somewhat limited		Somewhat limited	
	Slope	0.16	Slope	0.16
			Depth to saturated zone	0.15
DcA:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
Clarendon	Somewhat limited		Very limited	
	Depth to saturated zone	0.39	Depth to saturated zone	1.00
DnA:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
Norfolk	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
DnB:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
Norfolk	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
EuA:				
Eulonia	Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00
FoA:				
Foxworth	Not limited		Somewhat limited	
			Depth to saturated zone	0.61

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements	
	Rating class and limiting features	Value	Rating class and limiting features	Value
FuA:				
Fuquay	Not limited		Somewhat limited	
			Depth to saturated zone	0.61
GCA:				
Grady	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Shrink-swell	0.50
Croatan	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Subsidence	1.00	Subsidence	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Organic matter content	1.00		
GrB:				
Gritney	Somewhat limited		Very limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00
	Depth to saturated zone	0.07	Shrink-swell	0.50
HMA:				
Herod	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Muckalee	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
KBA:				
Kinston	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Bibb	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
LaC:				
Lakeland	Not limited		Not limited	
LeA:				
Leefield	Somewhat limited		Very limited	
	Depth to saturated zone	0.90	Depth to saturated zone	1.00
MeB:				
Meldrim	Not limited		Very limited	
			Depth to saturated zone	1.00

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements	
	Rating class and limiting features	Value	Rating class and limiting features	Value
NaB:				
Nankin	Not limited		Not limited	
NcC2:				
Nankin	Not limited		Not limited	
Cowarts	Not limited		Not limited	
OcA:				
Ocilla	Somewhat limited		Very limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00
PeA:				
Pelham	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PkA:				
Pickney	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RaA:				
Rains	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RbF:				
Remlik	Very limited		Very limited	
	Slope	1.00	Slope	1.00
Blanton	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Depth to saturated zone	0.15
RgA:				
Rigdon	Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00
StA:				
Stilson	Not limited		Very limited	
			Depth to saturated zone	1.00
SuA:				
Surrency	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
UaB:				
Uchee	Not limited		Somewhat limited	
			Depth to saturated zone	0.47

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements	
	Rating class and limiting features	Value	Rating class and limiting features	Value
UbC:				
Uchee	Not limited		Somewhat limited Depth to saturated zone	0.47
Blanton	Not limited		Somewhat limited Depth to saturated zone	0.15
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 10b.--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	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Unstable excavation walls	1.00
BdA:				
Bladen	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.60
	Low strength	1.00	Too clayey	0.50
	Shrink-swell	0.50	Unstable excavation walls	0.10
BeB:				
Blanton	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.15
BfB:				
Blanton	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.15
Foxworth	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.61
CAA:				
Chastain	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Unstable excavation walls	1.00
	Low strength	1.00	Flooding	0.80
	Shrink-swell	0.50	Too clayey	0.50
Tawcaw	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	0.75	Unstable excavation walls	1.00
	Shrink-swell	0.50	Flooding	0.80
	Low strength	0.50		

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ChA:				
Chipley	Somewhat limited		Very limited	
	Depth to saturated zone	0.19	Depth to saturated zone	1.00
			Unstable excavation walls	1.00
CnA:				
Clarendon	Somewhat limited		Very limited	
	Depth to saturated zone	0.19	Depth to saturated zone	1.00
			Unstable excavation walls	0.10
CoB:				
Cowarts	Not limited		Very limited	
			Unstable excavation walls	1.00
CtB:				
Cowarts	Not limited		Very limited	
			Unstable excavation walls	1.00
Gritney	Very limited		Very limited	
	Low strength	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50		
	Depth to saturated zone	0.03	Too clayey	0.28
			Unstable excavation walls	0.10
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Somewhat limited		Very limited	
	Slope	0.16	Unstable excavation walls	1.00
			Slope	0.16
Uchee	Somewhat limited		Very limited	
	Slope	0.16	Unstable excavation walls	1.00
			Depth to saturated zone	0.47
			Slope	0.16
			Too clayey	0.02
Blanton	Somewhat limited		Very limited	
	Slope	0.16	Unstable excavation walls	1.00
			Slope	0.16
			Depth to saturated zone	0.15
DcA:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
			Unstable excavation walls	0.10

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
DcA:				
Clarendon	Somewhat limited		Very limited	
	Depth to saturated zone	0.19	Depth to saturated zone	1.00
			Unstable excavation walls	0.10
DnA:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
			Unstable excavation walls	0.10
Norfolk	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
			Unstable excavation walls	0.10
DnB:				
Dothan	Not limited		Somewhat limited	
			Depth to saturated zone	0.95
			Unstable excavation walls	0.10
Norfolk	Not limited		Somewhat limited	
			Depth to saturated zone	0.15
			Unstable excavation walls	0.10
EuA:				
Eulonia	Somewhat limited		Very limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00
			Unstable excavation walls	0.10
FoA:				
Foxworth	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.61
FuA:				
Fuquay	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.61
GCA:				
Grady	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Too clayey	0.88
	Low strength	0.50	Unstable excavation walls	0.10

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GCA:				
Croatan	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	Unstable excavation walls	0.10
GrB:				
Gritney	Very limited		Very limited	
	Low strength	1.00	Depth to saturated zone	1.00
	Shrink-swell	0.50	Too clayey	0.28
	Depth to saturated zone	0.03	Unstable excavation walls	0.10
HMA:				
Herod	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Unstable excavation walls	1.00
			Flooding	0.80
Muckalee	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80
			Unstable excavation walls	0.10
KBA:				
Kinston	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80
	Low strength	1.00	Unstable excavation walls	0.10
Bibb	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.80
			Unstable excavation walls	0.10
LaC:				
Lakeland	Not limited		Very limited	
			Unstable excavation walls	1.00
LeA:				
Leefield	Somewhat limited		Very limited	
	Depth to saturated zone	0.60	Depth to saturated zone	1.00
			Unstable excavation walls	1.00

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
MeB:				
Meldrim	Not limited		Very limited	
			Depth to saturated zone	1.00
			Unstable excavation walls	1.00
NaB:				
Nankin	Not limited		Somewhat limited	
			Unstable excavation walls	0.10
			Too clayey	0.03
NcC2:				
Nankin	Not limited		Somewhat limited	
			Unstable excavation walls	0.10
			Too clayey	0.03
Cowarts	Not limited		Somewhat limited	
			Unstable excavation walls	0.10
OcA:				
Ocilla	Somewhat limited		Very limited	
	Depth to saturated zone	0.48	Depth to saturated zone	1.00
			Unstable excavation walls	1.00
PeA:				
Pelham	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Unstable excavation walls	1.00
PkA:				
Pickney	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Unstable excavation walls	1.00
			Flooding	0.80
RaA:				
Rains	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Unstable excavation walls	0.10
RbF:				
Remlik	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Unstable excavation walls	1.00
			Dense layer	0.50

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
RbF:				
Blanton	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Unstable excavation walls	1.00
			Depth to saturated zone	0.15
RgA:				
Rigdon	Somewhat limited		Very limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00
			Unstable excavation walls	1.00
StA:				
Stilson	Not limited		Very limited	
			Depth to saturated zone	1.00
			Unstable excavation walls	1.00
SuA:				
Surrency	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Unstable excavation walls	1.00
			Flooding	0.80
UaB:				
Uchee	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.47
			Too clayey	0.02
UbC:				
Uchee	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.47
			Too clayey	0.02
Blanton	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to saturated zone	0.15
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 11.--Sanitary Facilities

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.68	Depth to saturated zone	1.00
BdA:				
Bladen	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
BeB:				
Blanton	Somewhat limited		Very limited	
	Slow water movement	0.68	Seepage	1.00
	Depth to saturated zone	0.40		
BfB:				
Blanton	Somewhat limited		Very limited	
	Slow water movement	0.68	Seepage	1.00
	Depth to saturated zone	0.40		
Foxworth	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	0.71
	Filtering capacity	1.00		
CAA:				
Chastain	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00		
Tawcaw	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00		
ChA:				
Chipley	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00		

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CnA:				
Clarendon	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
CoB:				
Cowarts	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.50
			Slope	0.08
CtB:				
Cowarts	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.50
			Slope	0.08
Gritney	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	0.08
Urban land	Not rated		Not rated	
CuD:				
Cowarts	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Slope	0.16	Seepage	0.50
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Depth to saturated zone	0.94		
	Slope	0.16		
Blanton	Somewhat limited		Very limited	
	Slow water movement	0.68	Slope	1.00
	Depth to saturated zone	0.40	Seepage	1.00
	Slope	0.16		
DcA:				
Dothan	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00		
	Seepage, bottom layer	1.00		
Clarendon	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
DnA:				
Dothan	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00		
	Seepage, bottom layer	1.00		
Norfolk	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
	Depth to saturated zone	0.40		
DnB:				
Dothan	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Slope	0.08
	Seepage, bottom layer	1.00		
Norfolk	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
	Depth to saturated zone	0.40	Slope	0.08
EuA:				
Eulonia	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
FoA:				
Foxworth	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	0.71
	Filtering capacity	1.00		
FuA:				
Fuquay	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00		
GCA:				
Grady	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
Croatan	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GrB:				
Gritney	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	0.08
HMA:				
Herod	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
Muckalee	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
KBA:				
Kinston	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
Bibb	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.82
LaC:				
Lakeland	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.32
LeA:				
Leefield	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
MeB:				
Meldrim	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.68	Depth to saturated zone	1.00
NaB:				
Nankin	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.50
			Slope	0.08
NcC2:				
Nankin	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.50

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
NcC2:				
Cowarts	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.32
OcA:				
Ocilla	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
PeA:				
Pelham	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50		
PkA:				
Pickney	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00		
RaA:				
Rains	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
RbF:				
Remlik	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
Blanton	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.68	Seepage	1.00
	Depth to saturated zone	0.40		
RgA:				
Rigdon	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
StA:				
Stilson	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Seepage, bottom layer	1.00		

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
SuA:				
Surrency	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
UaB:				
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	0.08
	Depth to saturated zone	0.94		
UbC:				
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Depth to saturated zone	0.94		
Blanton	Somewhat limited		Very limited	
	Slow water movement	0.68	Seepage	1.00
	Depth to saturated zone	0.40	Slope	1.00
UrB:				
Udorthents	Not rated		Not rated	
W:				
Water	Not rated		Not rated	

Table 12.--Construction Materials

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. For potential source of sand, the ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value column 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. For potential sources of roadfill or topsoil, the numbers in the value columns also 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	Sand source		Roadfill source		Topsoil source	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:						
Albany	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Too sandy	0.14
					Too acid	0.68
BdA:						
Bladen	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Wetness	0.00
			Shrink-swell	0.91	Too acid	0.68
BeB:						
Blanton	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.94			Too acid	0.98
BfB:						
Blanton	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.94			Too acid	0.98
Foxworth	Fair		Good		Poor	
	Thickest layer	0.85			Too sandy	0.00
	Bottom layer	0.85			Too acid	0.98
CAA:						
Chastain	Fair		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.84	Low strength	0.00	Too clayey	0.00
			Shrink-swell	0.89	Too acid	0.68
Tawcaw	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.14	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Wetness	0.14
			Shrink-swell	0.96		
ChA:						
Chipley	Good		Fair		Poor	
	Bottom layer	0.85	Wetness	0.53	Too sandy	0.00
					Wetness	0.53
					Too acid	0.95
CnA:						
Clarendon	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.53	Wetness	0.53
	Bottom layer	0.00			Too acid	0.98
CoB:						
Cowarts	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.09
	Bottom layer	0.00			Too acid	0.98

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CtB:						
Cowarts	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.09
	Bottom layer	0.00			Too acid	0.98
Gritney	Poor		Poor		Poor	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.00
	Bottom layer	0.00	Wetness	0.76	Too acid	0.50
			Shrink-swell	0.95	Wetness	0.76
Urban land	Not rated		Not rated		Not rated	
CuD:						
Cowarts	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.09
	Bottom layer	0.00			Slope	0.84
					Too acid	0.98
Uchee	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.63			Slope	0.84
					Rock fragments	0.88
Blanton	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.94			Slope	0.84
					Too acid	0.98
DcA:						
Dothan	Poor		Good		Fair	
	Thickest layer	0.00			Too acid	0.98
	Bottom layer	0.00				
Clarendon	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.53	Wetness	0.53
	Bottom layer	0.00			Too acid	0.98
DnA:						
Dothan	Poor		Good		Fair	
	Thickest layer	0.00			Too acid	0.98
	Bottom layer	0.00				
Norfolk	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.53
	Bottom layer	0.00			Too acid	0.59
DnB:						
Dothan	Poor		Good		Fair	
	Thickest layer	0.00			Too acid	0.98
	Bottom layer	0.00				
Norfolk	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.53
	Bottom layer	0.00			Too acid	0.59
EuA:						
Eulonia	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.14	Too clayey	0.00
	Bottom layer	0.00			Wetness	0.14
					Too acid	0.68

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
FoA:						
Foxworth	Fair		Good		Poor	
	Thickest layer	0.85			Too sandy	0.00
	Bottom layer	0.85			Too acid	0.98
FuA:						
Fuquay	Poor		Good		Fair	
	Thickest layer	0.00			Too sandy	0.14
	Bottom layer	0.00			Too acid	0.98
GCA:						
Grady	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Wetness	0.00
			Shrink-swell	0.87	Too acid	0.59
Croatan	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Organic matter content high	0.00
					Too acid	0.00
GrB:						
Gritney	Poor		Poor		Poor	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.00
	Bottom layer	0.00	Wetness	0.76	Too acid	0.50
			Shrink-swell	0.95	Wetness	0.76
HMA:						
Herod	Fair		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.35				
Muckalee	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00				
KBA:						
Kinston	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00	Low strength	0.00	Too clayey	0.87
					Too acid	0.88
Bibb	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Rock fragments	0.12
					Too acid	0.88
LaC:						
Lakeland	Fair		Good		Poor	
	Thickest layer	0.85			Too sandy	0.00
	Bottom layer	0.99			Too acid	0.98
LeA:						
Leefield	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.22	Wetness	0.22
	Bottom layer	0.00			Too sandy	0.32
					Too acid	0.68

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MeB:						
Meldrim	Fair		Fair		Poor	
	Bottom layer	0.00	Wetness	0.89	Too sandy	0.00
	Thickest layer	0.85			Wetness	0.89
					Too acid	0.98
NaB:						
Nankin	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Too acid	0.88
NcC2:						
Nankin	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Too acid	0.88
Cowarts	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.09
	Bottom layer	0.00			Too acid	0.98
OcA:						
Ocilla	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.29	Too sandy	0.01
	Bottom layer	0.00			Wetness	0.29
					Too acid	0.88
PeA:						
Pelham	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Too sandy	0.04
					Too acid	0.68
PkA:						
Pickney	Fair		Poor		Poor	
	Bottom layer	0.19	Wetness	0.00	Wetness	0.00
	Thickest layer	0.64			Too sandy	0.00
					Too acid	0.59
RaA:						
Rains	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Too sandy	0.04
					Too acid	0.92
RbF:						
Remlik	Poor		Poor		Poor	
	Thickest layer	0.00	Slope	0.00	Slope	0.00
	Bottom layer	0.00			Too sandy	0.02
					Too acid	0.88
Blanton	Fair		Poor		Poor	
	Bottom layer	0.00	Slope	0.00	Slope	0.00
	Thickest layer	0.94			Too sandy	0.00
					Too acid	0.98
RgA:						
Rigdon	Fair		Fair		Poor	
	Bottom layer	0.00	Wetness	0.14	Too sandy	0.00
	Thickest layer	0.61			Wetness	0.14
					Too acid	0.68

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
StA:						
Stilson	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.89	Too sandy	0.32
	Bottom layer	0.00			Too acid	0.88
					Wetness	0.89
SuA:						
Surrency	Fair		Poor		Poor	
	Bottom layer	0.00	Wetness	0.00	Wetness	0.00
	Thickest layer	0.85			Too sandy	0.00
					Too acid	0.68
UaB:						
Uchee	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.63			Rock fragments	0.88
					Too acid	0.88
UbC:						
Uchee	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.63			Rock fragments	0.88
					Too acid	0.88
Blanton	Fair		Good		Poor	
	Bottom layer	0.00			Too sandy	0.00
	Thickest layer	0.94			Too acid	0.98
UrB:						
Udorthents	Not rated		Not rated		Not rated	
W:						
Water	Not rated		Not rated		Not rated	

Table 13.--Water Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AbA:				
Albany	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
			Seepage	1.00
BdA:				
Bladen	Not limited		Very limited	
			Depth to saturated zone	1.00
BeB:				
Blanton	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
BfB:				
Blanton	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
Foxworth	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
CAA:				
Chastain	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
			Piping	0.11
Tawcaw	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
			Piping	0.11
ChA:				
Chipley	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
			Seepage	1.00
CnA:				
Clarendon	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
CoB:				
Cowarts	Somewhat limited		Not limited	
	Seepage	0.57		
CtB:				
Cowarts	Somewhat limited		Not limited	
	Seepage	0.57		
Gritney	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.95

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CtB:				
Urban land	Not limited		Not rated	
CuD:				
Cowarts	Somewhat limited		Not limited	
	Seepage	0.57		
Uchee	Very limited		Somewhat limited	
	Seepage	1.00	Seepage	0.01
Blanton	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
DcA:				
Dothan	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.46
Clarendon	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
DnA:				
Dothan	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.46
Norfolk	Somewhat limited		Not limited	
	Seepage	0.70		
DnB:				
Dothan	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.46
Norfolk	Somewhat limited		Not limited	
	Seepage	0.70		
EuA:				
Eulonia	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
FoA:				
Foxworth	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
FuA:				
Fuquay	Very limited		Not limited	
	Seepage	1.00		
GCA:				
Grady	Not limited		Very limited	
			Ponding	1.00
			Depth to saturated zone	1.00
			Piping	0.14

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GCA:				
Croatan	Somewhat limited		Very limited	
	Seepage	0.12	Ponding	1.00
			Depth to saturated zone	1.00
			Seepage	1.00
			Hard to pack	1.00
GrB:				
Gritney	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.95
HMA:				
Herod	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
Muckalee	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
KBA:				
Kinston	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
			Piping	0.60
Bibb	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
			Piping	1.00
LaC:				
Lakeland	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
LeA:				
Leefield	Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00
MeB:				
Meldrim	Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	0.86
			Seepage	0.84
NaB:				
Nankin	Somewhat limited		Not limited	
	Seepage	0.70		
NcC2:				
Nankin	Somewhat limited		Not limited	
	Seepage	0.70		
Cowarts	Somewhat limited		Not limited	
	Seepage	0.57		

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
OcA:				
Ocilla	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00
PeA:				
Pelham	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00
PkA:				
Pickney	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00
RaA:				
Rains	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00
RbF:				
Remlik	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.39
Blanton	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00
RgA:				
Rigdon	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.29
StA:				
Stilson	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone	0.86
SuA:				
Surrency	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00
UaB:				
Uchee	Very limited Seepage	1.00	Somewhat limited Seepage	0.01
UbC:				
Uchee	Very limited Seepage	1.00	Somewhat limited Seepage	0.01
Blanton	Very limited Seepage	1.00	Very limited Seepage	1.00
UrB:				
Udorthents	Not limited		Not rated	
W:				
Water	Not rated		Not rated	

Table 14.--Engineering Properties

[Absence of an entry indicates that the data were not estimated]

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*	
AbA:												
Albany--------	0-10	Loamy sand, sand, fine sand, loamy fine sand	SP-SM, SP-SC, SM, SC-SM	A-2-4, A-4, A-3, A-2	0	0	100	100	50-85	5-45	0-0	NP-9
	10-47	Loamy sand, sand, fine sand, loamy fine sand	SP-SM, SP-SC, SM, SC-SM	A-2-4, A-4, A-3	0	0	100	100	50-85	5-45	0-0	NP-5
	47-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-2-4, A-6, A-4	0	0	95-100	90-100	55-90	30-55	15-31	1-13
BdA:												
Bladen--------	0-7	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	95-100	90-100	65-85	35-55	7-25	NP-8
	7-14	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	95-100	90-100	65-85	35-55	7-25	NP-8
	14-80	Clay, sandy clay	CH, SC, CL, MH, SM	A-7-6, A-7-5	0	0	95-100	90-100	75-100	40-95	42-61	18-30
BeB:												
Blanton-------	0-8	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-22	NP-3
	8-70	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-21	NP-3
	70-75	Sandy loam, fine sandy loam, sandy clay loam	SC, SM, SC-SM	A-6, A-2-7, A-2-4, A-4, A-2, A-2-5, A-2-6	0	0	100	95-100	65-94	29-56	20-44	4-18
	75-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-6, A-2, A-2-4, A-4, A-2-7, A-2-6, A-2-5	0	0	100	95-100	69-96	34-59	22-44	5-18

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
BfB:												
Blanton-------	0-8	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-22	NP-3
	8-70	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-21	NP-3
	70-75	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-6, A-2-7, A-2-4, A-4, A-2, A-2-5, A-2-6	0	0	100	95-100	65-94	29-56	20-44	4-18
	75-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-6, A-2-6, A-2-5, A-2, A-2-4, A-4, A-2-7	0	0	100	95-100	69-96	34-59	22-44	5-18
Foxworth------	0-8	Sand, fine sand	SP-SM	A-2-4	0	0	100	100	50-70	5-15	8-14	NP-2
	8-80	Sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	50-80	5-35	8-14	NP-2
CAA:												
Chastain------	0-4	Loam, silty clay loam, silt loam	CL-ML, CL, ML, SC-SM	A-4	0	0	76-100	75-100	58-100	40-88	15-30	1-10
	4-36	Clay, clay loam, silty clay loam, silty clay	CH, MH, CL	A-7, A-6	0	0	100	100	69-100	58-91	30-60	10-30
	36-58	Sandy clay loam, clay loam, silty clay loam, silty clay, clay	CH, MH, CL	A-7, A-6	0	0	100	100	82-100	45-85	30-60	10-30
	58-80	Sand, coarse sand, sandy loam, loamy sand, coarse sandy loam	SW-SM, SM, SC	A-2-4	0	0	78-100	77-100	56-92	4-25	5-60	NP-30
Tawcaw--------	0-2	Silty clay loam, silt loam	CL, ML, MH, CH	A-7	0	0	100	100	69-100	59-99	0-60	NP-28
	2-49	Silty clay loam, clay, silty clay	CL, CH	A-7, A-6	0	0	100	100	89-100	79-100	37-72	17-43
	49-80	Loamy sand, sand, coarse sand	SW-SM, SM, SC	A-2-4	0	0	78-100	77-100	55-86	12-31	0-33	NP-10
ChA:												
Chipley-------	0-8	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	50-70	5-15	8-12	NP-2
	8-80	Sand, coarse sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	50-80	5-35	8-12	NP-2

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
CnA:												
Clarendon-----	0-6	Loamy sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-75	15-30	7-21	NP-6
	6-16	Loamy sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-85	5-55	7-20	NP-8
	16-38	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	38-62	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	62-80	Sandy clay loam, sandy loam	SC-SM, SC	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
CoB:												
Cowarts-------	0-8	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	8-14	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2-6	0	0	95-100	90-100	60-95	23-45	21-41	6-21
	14-30	Sandy clay loam, sandy clay, clay loam	SC	A-7-6	0	0	95-100	90-100	60-95	25-50	33-49	17-28
	30-38	Sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	20-40	6-21
	38-60	Coarse sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	16-40	2-21
	60-80	Loamy sand, sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	0-39	NP-20
CtB:												
Cowarts-------	0-8	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	8-14	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2-6	0	0	95-100	90-100	60-95	23-45	21-41	6-21
	14-30	Sandy clay loam, sandy clay, clay loam	SC	A-7-6	0	0	95-100	90-100	60-95	25-50	33-49	17-28
	30-38	Sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	20-42	6-22
	38-60	Coarse sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	16-40	2-21
	60-80	Loamy sand, sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	0-42	NP-22
Gritney-------	0-8	Loamy sand	SM, SP-SM	A-2-4	0	0	90-100	85-100	75-99	10-20	20-30	NP-8
	8-50	Sandy clay, sandy clay, clay loam	CL, SC	A-7-6	0	0	95-100	90-100	80-100	36-60	45-70	22-40
	50-80	Clay loam, sandy loam, sandy clay loam	CL, SM, SC	A-4	0	0-2	95-100	80-100	80-100	45-80	20-40	NP-20
Urban land.												

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
CuD:												
Cowarts-------	0-8	Loamy sand	SM	A-2-4, A-2	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	8-14	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6, A-4	0	0	95-100	90-100	60-95	23-45	21-41	6-21
	14-30	Sandy clay loam, sandy clay, clay loam	SC	A-6, A-7, A-2-6	0	0	95-100	90-100	60-95	25-50	33-49	17-28
	30-38	Sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-7, A-2	0	0	85-100	80-100	60-95	25-58	20-41	6-22
	38-60	Coarse sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-7, A-2	0	0	85-100	80-100	60-95	25-58	16-41	2-22
	60-80	Loamy sand, sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-7, A-2	0	0	85-100	80-100	60-95	25-58	0-41	NP-22
Uchee---------	0-6	Sand	SM	A-2-4	0	0	91-100	73-100	55-82	7-16	0-26	NP-4
	6-35	Sand, loamy sand	SM	A-2-4	0	0	91-100	73-100	54-81	6-15	0-20	NP-4
	35-41	Sandy clay loam, sandy loam	SC, SC-SM	A-6	0	0	91-100	73-100	49-94	18-52	18-44	4-25
	41-53	Clay, sandy clay loam, sandy loam	CH, SC, CL	A-7	0	0	91-100	74-100	47-100	29-79	26-63	10-40
	53-80	Sandy clay loam, fine sandy loam, sandy loam	SC, SM, SC-SM, CL-ML, ML, CL	A-6, A-2-4, A-4	0	0	77-100	76-100	53-99	23-61	16-44	2-25
Blanton-------	0-8	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-22	NP-3
	8-70	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-21	NP-3
	70-75	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-6, A-2-7, A-2-4, A-4, A-2, A-2-5, A-2-6	0	0	100	95-100	65-94	29-56	20-44	4-18
	75-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-6, A-2-6, A-2-5, A-2, A-2-4, A-4, A-2-7	0	0	100	95-100	69-96	34-59	22-44	5-18

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
DcA:												
Dothan	0-9	Loamy sand, sandy loam	SM, SC-SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-75	15-40	7-21	NP-6
	9-17	Loamy sand, sandy loam	SC-SM, SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-85	5-55	7-20	NP-8
	17-42	Sandy loam, sandy clay loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	42-68	Sandy clay loam	SC, SM, SC-SM	A-6, A-2-4, A-4	0	0	100	90-100	80-100	35-80	20-45	6-21
	68-80	Sandy clay loam, sandy loam	SC-SM	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
Clarendon	0-6	Loamy sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-75	15-30	7-21	NP-6
	6-16	Loamy sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-85	5-55	7-20	NP-8
	16-38	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	38-62	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	62-80	Sandy clay loam, sandy loam	SC-SM, SC	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	5-13
DnA:												
Dothan	0-9	Loamy sand, sandy loam	SM, SC-SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-75	15-40	7-21	NP-6
	9-17	Loamy sand, sandy loam	SC-SM, SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-85	5-55	7-20	NP-8
	17-42	Sandy loam, sandy clay loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	42-68	Sandy clay loam	SC, SM, SC-SM	A-6, A-2-4, A-4	0	0	100	90-100	80-100	35-80	20-45	6-21
	68-80	Sandy clay loam, sandy loam	SC-SM	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
Norfolk	0-10	Loamy sand	SM	A-2	0	0	95-100	89-100	66-80	18-26	0-23	NP-4
	10-80	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	95-100	87-100	67-94	33-55	27-44	12-25

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
DnB:												
Dothan	0-9	Loamy sand, sandy loam	SM, SC-SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-75	15-40	7-21	NP-6
	9-17	Loamy sand, sandy loam	SC-SM, SM	A-2-4, A-4, A-1	0	0	95-100	90-100	45-85	5-55	7-20	NP-8
	17-42	Sandy loam, sandy clay loam	SC-SM, SC	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	42-68	Sandy clay loam	SC, SM, SC-SM	A-6, A-2-4, A-4	0	0	100	90-100	80-100	35-80	20-45	6-21
	68-80	Sandy clay loam, sandy loam	SC-SM	A-4, A-2-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
Norfolk	0-10	Loamy sand	SM	A-2	0	0	95-100	89-100	66-80	18-26	0-23	NP-4
	10-80	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	95-100	87-100	67-94	33-55	27-44	12-25
EuA:												
Eulonia	0-8	Sandy loam, loamy sand	SC-SM, SM, SC	A-2-4	0	0	95-100	90-100	55-70	25-40	7-25	NP-8
	8-13	Sandy loam, loamy sand, fine sandy loam	SC-SM, SM, SC	A-2-4, A-4	0	0	95-100	90-100	45-85	10-55	7-25	NP-8
	13-44	Sandy clay, clay, sandy clay loam	SC, CL, CH	A-6, A-2-4, A-2-6, A-4, A-7-6	0	0	95-100	90-100	70-100	30-95	25-60	8-30
	44-80	Sandy clay loam, loamy sand	SC, CL, CH	A-4, A-2-4, A-6, A-7-6	0	0	95-100	90-100	70-100	30-80	25-55	8-25
FoA:												
Foxworth	0-8	Sand, fine sand	SP-SM, SM	A-2-4	0	0	100	100	50-70	5-15	8-14	NP-2
	8-80	Sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	50-80	5-35	8-14	NP-2
FuA:												
Fuquay	0-9	Loamy sand, sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-75	15-30	7-20	NP-6
	9-28	Loamy sand, sand	SM, SC-SM	A-2-4, A-1	0	0	95-100	90-100	45-75	5-45	7-20	NP-6
	28-44	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
	44-63	Sandy clay loam, sandy loam	SC, SM, SC-SM	A-4, A-2-4, A-6	0	0	100	100	80-100	35-80	20-45	6-21
	63-80	Sandy loam, sandy clay loam	SC-SM	A-2-4, A-4, A-6	0	0	95-100	90-100	55-90	25-55	20-30	5-13
GCA:												
Grady	0-5	Loam	CL, CL-ML, ML	A-4, A-6	0	0	100	99-100	85-100	50-75	15-30	NP-15
	5-80	Clay, sandy clay	CL, CH	A-7, A-6	0	0	100	100	90-100	55-90	30-51	12-24

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
GCA:												
Croatan	0-28	Muck, highly decomposed plant material, mucky peat	PT	A-8	0	0	100	100	100	100	---	NP
	28-60	Mucky fine sandy loam, mucky sandy loam, sandy loam, sandy clay loam	SC-SM, SM, SC	A-2-4, A-6, A-4	0	0	100	100	83-100	25-51	23-73	4-22
	60-80	Sandy clay loam, sandy loam, loamy sand	SC, SM, SC-SM	A-2-4, A-4, A-6	0	0	100	100	66-90	31-55	21-53	6-23
GrB:												
Gritney	0-8	Loamy sand	SM, SP-SM	A-2-4	0	0	90-100	85-100	75-99	10-20	20-30	NP-8
	8-50	Sandy clay, sandy clay, clay loam	CL, SC	A-7-6	0	0	95-100	90-100	80-100	36-60	45-70	22-40
	50-80	Clay loam, sandy loam, sandy clay loam	CL, SM, SC	A-6, A-4	0	0-2	95-100	80-100	80-100	45-80	20-40	NP-20
HMA:												
Herod	0-6	Loam	CL-ML	A-4	0	0	100	95-100	80-95	50-75	29-47	9-17
	6-39	Sandy loam, sandy clay loam	SC-SM, SC	A-4	0	0	100	95-100	70-90	36-60	20-40	6-21
	39-80	Sand, sandy loam, sandy clay loam	SC, SM, ML, CL	A-4	0	0	100	95-100	70-90	36-60	0-36	NP-17
Muckalee	0-6	Loam	SC, CL	A-4	0	0	95-100	90-100	50-95	30-60	17-35	4-15
	6-80	Sandy loam, loamy sand	SM	A-2-4	0	0	95-100	80-100	60-90	20-40	15-20	NP-4
KBA:												
Kinston	0-6	Loam	CL, CL-ML	A-4	0	0	100	98-100	85-100	50-97	17-40	4-15
	6-80	Sandy clay loam, loam, sandy loam, clay loam	CL	A-6	0	0	100	95-100	75-100	60-95	20-45	8-22
Bibb	0-14	Sandy loam, loamy sand	ML, CL-ML	A-4	0	0	95-100	90-100	60-90	30-60	0-25	NP-7
	14-80	Sandy loam, silt loam, loam	ML, CL-ML, SM, SC-SM	A-4	0	0	60-100	50-100	40-100	30-90	0-30	NP-7
LaC:												
Lakeland	0-5	Sand	SP-SM	A-3, A-2-4	0	0	90-100	90-100	60-100	5-12	0-22	NP-4
	5-80	Sand, fine sand	SW-SM, SP-SM, SP	A-3, A-2-4	0	0	90-100	90-100	50-100	1-12	0-20	NP-3

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
LeA:												
Leefield------	0-10	Loamy sand, sand	SC-SM, SM	A-2-4	0	0	95-100	90-100	45-75	15-30	7-21	NP-6
	10-29	Loamy sand, fine sand, sand	SC-SM, SM	A-2-4, A-4	0	0	95-100	90-100	45-85	5-45	7-21	NP-6
	29-34	Sandy loam, sandy clay loam	CL, SC-SM, CL-ML	A-4, A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	6-11
	34-53	Sandy clay loam, sandy loam	CL, SC-SM, CL-ML	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-40	6-16
	53-71	Sandy clay loam, sandy loam	CL, SC-SM, CL-ML	A-4, A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	6-11
	71-80	Sandy clay loam, sandy loam	CL, SC-SM, CL-ML	A-4, A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-30	6-11
MeB:												
Meldrim-------	0-5	Sand, fine sand, loamy sand, loamy fine sand	SM	A-2-4, A-1	0	0	100	90-100	40-70	5-15	5-15	NP-3
	5-56	Sand, fine sand, loamy sand, loamy fine sand	SM	A-2-4, A-1	0	0	90-100	85-100	40-70	5-15	5-15	NP-3
	56-80	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SM, SC	A-2-4, A-4, A-6	0	0	90-100	85-100	45-90	15-55	10-40	1-15
NaB:												
Nankin--------	0-10	Loamy sand	SM, SP-SM	A-2	0	0	85-100	85-100	50-85	10-35	17-26	2-7
	10-51	Sandy clay, clay, sandy clay loam	CL, CL-ML, SC	A-6, A-7, A-4	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	51-79	Sandy clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-4, A-6, A-2	0	0	98-100	95-100	70-85	25-55	20-40	4-16
NcC2:												
Nankin--------	0-4	Sandy loam, loamy sand	SM, SP-SM	A-2-4	0	0	85-100	85-100	50-85	10-35	17-30	2-11
	4-41	Sandy clay, clay, sandy clay loam	CL, CL-ML, SC	A-6	0	0	98-100	95-100	75-95	40-70	25-45	7-20
	41-80	Sandy loam, sandy clay loam	SC, SC-SM, CL-ML, CL	A-4	0	0	98-100	95-100	70-85	25-55	20-40	4-16
Cowarts--------	0-4	Sandy loam	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	4-25	Sandy clay loam, sandy clay, clay loam	SC	A-7-6	0	0	95-100	90-100	60-95	25-50	33-49	17-28
	25-36	Sandy clay loam, sandy clay, clay loam	SC	A-7-6	0	0	95-100	90-100	60-95	25-50	33-49	17-28
	36-79	Sandy loam, sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	85-100	80-100	60-95	25-58	27-44	12-25

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
OcA:												
Ocilla---------	0-7	Loamy sand	SM, SC-SM	A-2-4	0	0	95-100	90-100	45-75	15-30	7-21	NP-6
	7-21	Loamy sand	SM, SP-SM	A-2-4	0	0	100	95-100	75-100	8-35	17-26	1-6
	21-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, CL, ML	A-4, A-2-6, A-2-4, A-6	0	0	100	95-100	80-100	20-55	20-40	NP-18
PeA:												
Pelham---------	0-6	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	50-75	15-30	7-21	2-6
	6-33	Loamy sand, loamy fine sand	SM	A-2	0	0	100	100	40-85	5-45	7-21	2-6
	33-41	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-6, A-4	0	0	100	100	60-90	30-55	7-40	NP-16
	41-66	Sandy clay loam, sandy loam	SC, SC-SM	A-4, A-6, A-2	0	0	100	100	60-90	30-55	7-40	NP-16
	66-80	Sandy loam, loamy sand	SC-SM	A-2-4, A-4	0	0	100	100	50-85	5-55	7-25	NP-8
PkA:												
Pickney--------	0-38	Mucky sand, loamy fine sand	SM, SP-SM	A-2-4	0	0	100	100	50-90	10-25	0-55	NP-6
	38-80	Sand, loamy fine sand, loamy sand, fine sand	SM, SP-SM, SW-SM, SC-SM	A-2-4	0	0	100	100	50-90	3-25	0-35	NP-6
RaA:												
Rains----------	0-6	Loamy sand, loamy fine sand, sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0	95-100	90-100	45-75	15-40	18-43	2-13
	6-18	Loamy sand, loamy fine sand, sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0	95-100	90-100	45-75	15-40	17-33	2-13
	18-28	Sandy loam, sandy clay loam	SC, SC-SM, CL	A-2-4, A-6, A-7-6	0	0	95-100	90-100	55-95	25-55	26-45	9-25
	28-70	Sandy clay loam, sandy clay	SC, CL	A-6, A-7-6	0	0	95-100	90-100	70-95	30-60	26-54	9-32
	70-80	Sandy clay loam, sandy clay	SC, CL	A-6, A-7-6	0	0	95-100	90-100	70-95	30-60	26-54	9-32
RbF:												
Remlik---------	0-8	Loamy sand, sand	SP-SM, SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	8-30	Loamy sand, sand	SP-SM, SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	30-57	Sandy clay loam, sandy loam	SC, SM, SC-SM	A-2-4, A-6, A-4	0	0	90-100	75-100	60-90	30-40	20-40	3-16
	57-80	Sandy loam, loamy sand	SM, SC-SM, SC	A-2-4, A-6, A-4	0	0	85-100	75-100	50-85	15-40	10-40	NP-14

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
RbF:												
Blanton-------	0-8	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-22	NP-3
	8-70	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-21	NP-3
	70-75	Sandy loam, fine sandy loam, sandy clay loam	SC, SM, SC-SM	A-6, A-2-7, A-2-4, A-4, A-2, A-2-5, A-2-6	0	0	100	95-100	65-94	29-56	20-44	4-18
	75-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-6, A-2, A-2-4, A-4, A-2-7, A-2-6, A-2-5	0	0	100	95-100	69-96	34-59	22-44	5-18
RgA:												
Rigdon--------	0-6	Sand, loamy sand	SP-SM, SW-SM, SM	A-2, A-2-4	0	0	100	100	50-70	5-15	7-16	NP-3
	6-11	Sand, fine sand, loamy sand	SC-SM, SM	A-2, A-2-4	0	0	100	100	50-85	5-45	7-21	NP-6
	11-36	Sand, loamy sand, fine sand	SP-SM, SM	A-2, A-2-4	0	0	100	100	50-85	5-45	7-21	NP-6
	36-80	Sandy clay loam, sandy loam	SC, SC-SM	A-4, A-6, A-2	0	0	100	100	85-100	30-45	20-38	4-15
StA:												
Stilson-------	0-9	Loamy sand, sand	SM	A-2, A-2-4	0	0	95-100	90-100	45-75	15-30	6-16	NP-5
	9-26	Loamy sand, sand	SM	A-2	0	0	95-100	90-100	45-75	15-30	6-16	NP-5
	26-35	Sandy loam, sandy clay loam	SM	A-2, A-4	0	0	95-100	90-100	45-75	5-50	6-16	NP-5
	35-61	Sandy clay loam, sandy loam	CL, SC-SM, CL-ML	A-6, A-2-4	0	0	95-100	90-100	55-90	25-55	20-40	6-16
	61-77	Sandy clay loam	CL, SM, SC-SM, SC	A-6, A-2, A-4	0	0	95-100	90-100	55-100	30-80	7-40	NP-16
	77-80	Sandy clay loam, sandy loam	SM	A-2, A-4	0	0	95-100	90-100	45-75	5-50	6-16	NP-5
SuA:												
Surrency------	0-22	Mucky sand, loamy sand, mucky fine sand, sand	SP-SM, SW-SM, SM	A-2-4	0	0	100	95-100	50-85	5-45	7-16	NP-3
	22-35	Sandy loam, sandy clay loam	SC-SM, SC, SM	A-2-4, A-4	0	0	100	100	60-85	25-55	7-40	NP-16
	35-80	Sandy clay loam, sandy loam	SC, CL	A-2-4, A-4, A-6	0	0	100	100	60-90	30-55	7-40	NP-16

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
UaB:												
Uchee	0-6	Sand	SM	A-2	0	0	91-100	73-100	55-82	7-16	0-26	NP-4
	6-35	Sand, loamy sand	SM	A-2	0	0	91-100	73-100	54-81	6-15	0-20	NP-4
	35-41	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	91-100	73-100	49-94	18-52	18-44	4-25
	41-53	Clay, sandy clay loam, sandy loam	CH, SC, CL	A-7	0	0	91-100	74-100	47-100	29-79	26-63	10-40
	53-80	Sandy clay loam, fine sandy loam, sandy loam	SC, SM, SC-SM, CL-ML, ML, CL	A-6, A-2-4, A-4	0	0	77-100	76-100	53-99	23-61	16-44	2-25
UbC:												
Uchee	0-6	Sand	SM	A-2	0	0	91-100	73-100	55-82	7-16	0-26	NP-4
	6-35	Sand, loamy sand	SM	A-2	0	0	91-100	73-100	54-81	6-15	0-20	NP-4
	35-41	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	91-100	73-100	49-94	18-52	18-44	4-25
	41-53	Clay, sandy clay loam, sandy loam	CH, SC, CL	A-7	0	0	91-100	74-100	47-100	29-79	26-63	10-40
	53-80	Sandy clay loam, fine sandy loam, sandy loam	SC, SM, SC-SM, CL-ML, ML, CL	A-6, A-2-4, A-4	0	0	77-100	76-100	53-99	23-61	16-44	2-25
Blanton	0-8	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-22	NP-3
	8-70	Sand, loamy sand	SP-SM	A-2-4, A-3, A-2	0	0	100	90-100	66-80	6-12	0-21	NP-3
	70-75	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-6, A-2-7, A-2-4, A-4, A-2, A-2-5, A-2-6	0	0	100	95-100	65-94	29-56	20-44	4-18
	75-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-6, A-2-6, A-2-5, A-2, A-2-4, A-4, A-2-7	0	0	100	95-100	69-96	34-59	22-44	5-18
UrB:												
Udorthents.												
W:												
Water.												

Table 15.--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	Permeability (Ksat)	Available water capacity	Linear extensibility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*pH*	*Pct*			
AbA:											
Albany--------	0-10	0-15	1.30-1.60	6-20	0.06-0.11	0.0-0.0	3.5-6.0	0.5-1.0	.10	.10	5
	10-47	0-15	1.30-1.60	6-20	0.06-0.11	0.0-0.0	3.5-6.0	0.0-0.5	.10	.10	
	47-80	5-35	1.30-1.60	0.2-2	0.11-0.17	0.0-2.9	3.5-6.0	0.0-0.5	.15	.15	
BdA:											
Bladen--------	0-7	5-20	1.40-1.50	0.6-6	0.12-0.16	0.0-2.9	3.5-5.5	1.0-2.0	.24	.24	5
	7-14	5-20	1.40-1.50	0.6-6	0.12-0.16	0.0-2.9	3.5-5.5	1.0-2.0	.24	.24	
	14-80	35-55	1.25-1.45	0.06-0.2	0.08-0.16	3.0-5.9	3.5-5.5	0.0-0.5	.32	.32	
BeB:											
Blanton-------	0-8	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	8-70	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.0-0.8	.10	.10	
	70-75	10-35	1.50-1.65	2-6	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.15	.15	
	75-80	12-35	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
BfB:											
Blanton-------	0-8	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	8-70	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.0-0.8	.10	.10	
	70-75	10-35	1.50-1.65	2-6	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.15	.15	
	75-80	12-35	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
Foxworth------	0-8	1-8	1.60-1.70	6-23	0.06-0.08	0.0-2.9	4.5-6.5	0.5-2.0	.10	.10	5
	8-80	1-8	1.60-1.70	6-23	0.05-0.07	0.0-2.9	4.5-6.5	0.0-0.5	.10	.10	
CAA:											
Chastain------	0-4	5-40	1.35-1.45	0.6-6	0.20-0.24	3.0-5.0	3.5-6.0	1.0-6.0	.32	.32	4
	4-36	27-60	1.30-1.50	0.06-0.2	0.09-0.20	3.0-5.9	3.5-6.0	1.0-3.0	.37	.37	
	36-58	20-60	1.30-1.50	0.06-0.2	0.09-0.20	3.0-5.9	3.5-6.0	1.0-3.0	.37	.37	
	58-80	0-20	1.50-1.70	6-20	0.06-0.20	0.0-2.9	3.5-6.0	1.0-3.0	.10	.10	
Tawcaw--------	0-2	0-40	1.30-1.60	0.06-0.2	0.12-0.18	3.0-5.9	4.5-6.5	2.0-5.0	.32	.32	4
	2-49	25-60	1.30-1.60	0.06-0.2	0.12-0.16	3.0-5.9	4.5-6.5	1.0-3.0	.37	.37	
	49-80	0-15	1.50-1.70	6-20	0.06-0.20	0.0-2.9	4.5-6.5	1.0-3.0	.10	.10	
ChA:											
Chipley-------	0-8	1-5	1.60-1.70	6-23	0.05-0.09	0.0-2.9	3.5-6.0	0.5-2.0	.10	.10	5
	8-80	1-7	1.60-1.70	6-23	0.04-0.06	0.0-2.9	4.5-6.0	0.0-0.5	.10	.10	
CnA:											
Clarendon-----	0-6	5-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	4.5-6.5	1.0-2.0	.10	.10	5
	6-16	5-15	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.20	.20	
	16-38	15-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
	38-62	15-35	1.35-1.50	0.06-0.6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
	62-80	15-35	1.35-1.50	0.06-0.6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
CoB:											
Cowarts-------	0-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	4.5-5.5	0.5-2.0	.15	.15	4
	8-14	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	4.5-5.5	0.2-1.0	.28	.28	
	14-30	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	30-38	10-30	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	38-60	5-30	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	60-80	2-29	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	

Table 15.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*pH*	*Pct*			
CtB:											
Cowarts	0-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	4.5-5.5	0.5-2.0	.15	.15	4
	8-14	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	4.5-5.5	0.2-1.0	.28	.28	
	14-30	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	30-38	10-32	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	38-60	5-30	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	60-80	2-32	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
Gritney	0-8	5-12	1.30-1.50	2-6	0.08-0.12	0.0-2.9	3.5-5.5	0.5-2.0	.15	.15	5
	8-50	35-60	1.30-1.50	0.06-0.2	0.10-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.32	.32	
	50-80	10-35	1.30-1.50	0.06-6	0.06-0.12	0.0-2.9	3.5-5.5	0.0-0.1	.28	.28	
Urban land.											
CuD:											
Cowarts	0-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	4.5-5.5	0.5-2.0	.15	.15	4
	8-14	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	4.5-5.5	0.2-1.0	.28	.28	
	14-30	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	30-38	10-31	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	38-60	5-31	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	60-80	2-31	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
Uchee	0-6	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.2-3.0	.10	.10	5
	6-35	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.0-0.5	.10	.10	
	35-41	8-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.3	.24	.24	
	41-53	15-55	1.45-1.65	0.2-1	0.10-0.16	3.0-5.9	4.5-5.5	0.0-0.2	.28	.28	
	53-80	5-35	1.35-1.50	0.6-6	0.11-0.22	0.0-2.9	4.5-5.5	0.0-0.1	.24	.24	
Blanton	0-8	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	8-70	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.0-0.8	.10	.10	
	70-75	10-35	1.50-1.65	2-6	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.15	.15	
	75-80	12-35	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
DcA:											
Dothan	0-9	0-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	4.5-6.0	1.0-2.0	.15	.15	5
	9-17	0-15	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.15	.15	
	17-42	5-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	42-68	20-35	1.30-1.45	0.06-0.6	0.08-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	68-80	15-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Clarendon	0-6	5-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	4.5-6.5	1.0-2.0	.10	.10	5
	6-16	5-15	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.20	.20	
	16-38	15-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
	38-60	15-35	1.35-1.50	0.06-0.6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
	60-80	15-35	1.35-1.50	0.06-0.6	0.11-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
DnA:											
Dothan	0-9	0-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	4.5-6.0	1.0-2.0	.15	.15	5
	9-17	0-15	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.15	.15	
	17-42	5-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	42-68	20-35	1.30-1.45	0.06-0.6	0.08-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	68-80	15-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Norfolk	0-10	2-8	1.55-1.70	6-20	0.06-0.11	0.0-1.0	4.5-6.0	0.5-2.0	.17	.17	5
	10-80	18-35	1.30-1.65	0.6-2	0.10-0.18	0.0-2.9	4.5-5.5	0.0-0.3	.24	.24	
DnB:											
Dothan	0-9	0-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	4.5-6.0	1.0-2.0	.15	.15	5
	9-17	0-15	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.15	.15	
	17-42	5-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	42-68	20-35	1.30-1.45	0.06-0.6	0.08-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	68-80	15-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Norfolk	0-10	2-8	1.55-1.70	6-20	0.06-0.11	0.0-1.0	4.5-6.0	0.5-2.0	.17	.17	5
	10-80	18-35	1.30-1.65	0.6-2	0.10-0.18	0.0-2.9	4.5-5.5	0.0-0.3	.24	.24	

Table 15.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*pH*	*Pct*			
EuA:											
Eulonia	0-8	5-20	1.40-1.50	0.6-6	0.12-0.14	0.0-2.9	4.5-6.5	1.0-2.0	.24	.24	5
	8-13	5-20	1.40-1.55	0.6-20	0.08-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	13-44	20-55	1.25-1.45	0.2-0.6	0.08-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.20	.20	
	44-80	5-35	1.30-1.45	0.6-2	0.08-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
FoA:											
Foxworth	0-8	1-8	1.60-1.70	6-23	0.06-0.08	0.0-2.9	4.5-6.5	0.5-2.0	.10	.10	5
	8-80	1-8	1.60-1.70	6-23	0.05-0.07	0.0-2.9	4.5-6.5	0.0-0.5	.10	.10	
FuA:											
Fuquay	0-9	0-15	1.45-1.55	6-20	0.09-0.11	0.0-2.9	3.5-6.0	1.0-2.0	.10	.10	5
	9-28	0-15	1.45-1.60	6-20	0.06-0.11	0.0-2.9	3.5-6.0	0.0-0.5	.20	.20	
	28-44	5-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	3.5-6.0	0.0-0.5	.32	.32	
	44-63	5-35	1.30-1.45	0.2-6	0.08-0.17	0.0-2.9	3.5-6.0	0.0-0.5	.20	.20	
	63-80	5-35	1.35-1.50	0.6-6	0.11-0.17	0.0-2.9	3.5-6.0	0.0-0.5	.32	.32	
GCA:											
Grady	0-5	20-30	1.20-1.45	0.6-2	0.10-0.18	0.0-2.9	3.5-5.5	1.0-4.0	.24	.24	5
	5-80	45-65	1.50-1.60	0.06-0.2	0.12-0.16	3.0-5.9	3.5-5.5	0.0-0.5	.32	.32	
Croatan	0-28	0-0	0.40-0.65	0.06-6	0.35-0.45	0.0-2.9	3.5-4.4	25-60	---	---	1
	28-60	8-34	1.40-1.60	0.2-6	0.10-0.15	0.0-2.9	3.5-5.5	2.0-15	.17	.17	
	60-80	10-34	1.40-1.60	0.2-2	0.12-0.20	0.0-2.9	3.5-5.5	0.5-5.0	.24	.24	
GrB:											
Gritney	0-8	5-12	1.30-1.50	2-6	0.08-0.12	0.0-2.9	3.5-5.5	0.5-2.0	.15	.15	5
	8-50	35-60	1.30-1.50	0.06-0.2	0.10-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.32	.32	
	50-80	10-35	1.30-1.50	0.06-6	0.06-0.12	0.0-2.9	3.5-5.5	0.0-0.1	.28	.28	
HMA:											
Herod	0-6	15-25	1.25-1.55	0.6-2	0.12-0.20	0.0-2.9	5.1-6.0	2.0-6.0	.24	.24	5
	6-39	10-30	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.20	.20	
	39-80	2-25	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.20	.20	
Muckalee	0-6	10-25	1.30-1.45	0.6-2	0.09-0.15	0.0-2.9	5.1-7.3	1.0-2.0	.20	.20	5
	6-80	5-20	1.35-1.50	0.6-2	0.08-0.12	0.0-2.9	5.6-8.4	0.0-0.5	.20	.20	
KBA:											
Kinston	0-6	5-27	1.30-1.50	0.6-2	0.14-0.20	0.0-2.9	4.5-5.5	2.0-5.0	.37	.37	5
	6-80	18-35	1.30-1.50	0.6-2	0.14-0.18	0.0-2.9	4.5-5.5	0.0-3.0	.24	.24	
Bibb	0-14	2-18	1.40-1.65	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	1.0-3.0	.20	.20	5
	14-80	2-18	1.45-1.75	0.6-2	0.10-0.20	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
LaC:											
Lakeland	0-5	2-8	1.35-1.65	6-20	0.05-0.09	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	5-80	1-6	1.50-1.60	6-20	0.02-0.08	0.0-2.9	4.5-6.0	0.0-0.5	.10	.10	

Table 15.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*pH*	*Pct*			
LeA:											
Leefield	0-10	0-15	1.45-1.60	6-20	0.08-0.14	0.0-2.9	4.5-6.0	1.0-2.0	.05	.05	5
	10-29	0-15	1.45-1.60	6-20	0.04-0.12	0.0-2.9	4.5-5.5	0.0-0.5	.05	.05	
	29-34	15-25	1.50-1.65	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	34-53	15-35	1.50-1.70	0.2-0.6	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	53-71	15-25	1.50-1.65	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	71-80	15-25	1.50-1.65	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
MeB:											
Meldrim	0-5	0-10	1.30-1.60	6-20	0.06-0.08	0.0-2.9	3.5-6.0	0.5-1.0	.10	.10	5
	5-56	0-10	1.30-1.60	6-20	0.06-0.08	0.0-2.9	3.5-6.0	0.5-1.0	.10	.10	
	56-80	5-35	1.30-1.70	0.1-2	0.05-0.17	0.0-2.9	3.5-6.0	0.0-0.5	.32	.32	
NaB:											
Nankin	0-10	5-12	1.45-1.65	2-6	0.05-0.10	0.0-2.9	4.5-5.5	0.5-1.0	.17	.17	3
	10-51	28-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	51-79	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
NcC2:											
Nankin	0-4	5-17	1.45-1.65	2-6	0.05-0.10	0.0-2.9	4.5-5.5	0.5-1.0	.28	.28	3
	4-41	28-50	1.30-1.70	0.2-0.6	0.11-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
	41-84	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
Cowarts	0-4	15-20	1.30-1.70	2-6	0.06-0.10	0.0-2.9	4.5-5.5	0.5-2.0	.24	.24	4
	4-25	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	25-36	25-40	1.30-1.50	0.2-2	0.10-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	36-79	15-35	1.65-1.80	0.06-0.6	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
OcA:											
Ocilla	0-7	0-15	1.45-1.60	6-20	0.08-0.14	0.0-2.9	4.5-5.5	1.0-2.0	.10	.10	5
	7-25	4-10	1.45-1.65	2-20	0.05-0.08	0.0-2.9	4.5-5.5	1.0-2.0	.10	.10	
	25-60	15-35	1.55-1.70	0.6-2	0.09-0.12	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
PeA:											
Pelham	0-6	5-10	1.45-1.55	6-20	0.09-0.11	0.0-2.9	3.5-5.5	1.0-3.0	.10	.10	5
	6-33	5-10	1.45-1.60	6-20	0.05-0.10	0.0-2.9	3.5-5.5	0.0-0.5	.10	.10	
	33-41	15-30	1.35-1.50	0.6-2	0.11-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.24	.24	
	41-66	15-30	1.35-1.50	0.6-2	0.11-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.24	.24	
	66-80	5-20	1.35-1.60	0.6-20	0.05-0.16	0.0-2.9	3.5-5.5	0.0-0.5	.24	.24	
PkA:											
Pickney	0-38	2-10	1.20-1.40	6-20	0.04-0.08	0.0-2.9	3.5-6.0	3.0-15	.10	.10	5
	38-80	1-10	1.40-1.60	6-20	0.03-0.11	0.0-2.9	3.5-6.0	2.0-6.0	.20	.20	
RaA:											
Rains	0-6	5-20	1.15-1.55	2-6	0.13-0.15	0.0-2.9	3.5-5.5	1.0-6.0	.17	.17	5
	6-18	5-20	1.15-1.55	2-6	0.13-0.15	0.0-2.9	3.5-5.5	0.5-1.0	.17	.17	
	18-28	10-20	1.30-1.60	0.6-2	0.12-0.19	0.0-2.9	3.5-5.0	0.5-1.0	.24	.24	
	28-70	15-45	1.30-1.60	0.6-2	0.15-0.19	0.0-2.9	3.5-5.5	0.5-1.0	.15	.15	
	70-80	15-45	1.30-1.60	0.6-2	0.15-0.19	0.0-2.9	3.5-5.5	0.5-1.0	.15	.15	
RbF:											
Remlik	0-8	5-10	1.35-1.45	6-20	0.03-0.05	0.0-2.9	3.5-6.0	0.0-1.0	.15	.15	5
	8-30	5-10	1.35-1.45	6-20	0.03-0.05	0.0-2.9	3.5-6.0	0.0-1.0	.15	.15	
	30-57	15-35	1.55-1.70	0.6-2	0.09-0.12	0.0-2.9	3.5-6.0	0.0-0.2	.24	.24	
	57-80	5-30	1.80-1.95	0.06-0.2	0.04-0.08	0.0-2.9	3.5-6.0	0.0-0.2	.15	.15	
Blanton	0-8	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	8-70	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.0-0.8	.10	.10	
	70-75	10-35	1.50-1.65	2-6	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.15	.15	
	75-80	12-35	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	

Table 15.--Physical and Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*pH*	*Pct*			
RgA:											
Rigdon	0-6	0-10	1.50-1.60	6-20	0.06-0.08	0.0-2.9	3.5-5.5	1.0-4.0	.02	.02	5
	6-11	0-15	1.45-1.60	6-20	0.05-0.10	0.0-2.9	3.5-5.5	1.0-4.0	.05	.05	
	11-36	0-15	1.45-1.60	6-20	0.05-0.10	0.0-2.9	3.5-5.5	0.0-0.5	.05	.05	
	36-80	15-35	1.45-1.65	0.6-2	0.10-0.15	0.0-2.9	3.5-5.5	0.0-0.5	.20	.20	
StA:											
Stilson	0-9	0-15	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-5.5	1.0-2.0	.10	.10	5
	9-26	0-15	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-5.5	1.0-2.0	.10	.10	
	26-35	15-35	1.55-1.70	6-20	0.06-0.09	0.0-2.9	4.5-5.5	0.0-0.5	.10	.10	
	35-61	15-35	1.50-1.70	0.2-0.6	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	61-77	20-35	1.40-1.55	0.6-6	0.11-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.32	.32	
	77-80	10-35	1.55-1.70	6-20	0.06-0.09	0.0-2.9	4.5-5.5	0.0-0.5	.10	.10	
SuA:											
Surrency	0-22	0-10	1.50-1.60	6-20	0.12-0.14	0.0-2.9	3.5-5.5	10-18	.10	.10	5
	22-35	5-35	1.35-1.50	0.6-2	0.11-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.15	.15	
	35-80	15-35	1.35-1.50	0.2-0.6	0.11-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.15	.15	
UaB:											
Uchee	0-6	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.2-3.0	.10	.10	5
	6-35	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.0-0.5	.10	.10	
	35-41	8-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.3	.24	.24	
	41-53	15-55	1.45-1.65	0.2-1	0.10-0.16	3.0-5.9	4.5-5.5	0.0-0.2	.28	.28	
	53-80	5-35	1.35-1.50	0.6-6	0.11-0.22	0.0-2.9	4.5-5.5	0.0-0.1	.24	.24	
UbC:											
Uchee	0-6	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.2-3.0	.10	.10	5
	6-35	1-8	1.30-1.70	6-20	0.05-0.10	0.0-1.0	4.5-5.5	0.0-0.5	.10	.10	
	35-41	8-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.3	.24	.24	
	41-53	15-55	1.45-1.65	0.2-1	0.10-0.16	3.0-5.9	4.5-5.5	0.0-0.2	.28	.28	
	53-62	5-35	1.35-1.50	0.6-6	0.11-0.22	0.0-2.9	4.5-5.5	0.0-0.1	.24	.24	
Blanton	0-8	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.5-1.0	.10	.10	5
	8-70	1-7	1.30-1.60	6-20	0.03-0.07	0.0-2.9	4.5-6.0	0.0-0.8	.10	.10	
	70-75	10-35	1.50-1.65	2-6	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.15	.15	
	75-80	12-35	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
UrB:											
Udorthents.											
W:											
Water.											

Table 16.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft		*Ft*				
AbA:									
Albany	C								
		Jan-Apr	1.0-2.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.0-2.5	Apparent	---	---	---	---	None
BdA:									
Bladen	D								
		Jan-Feb	0.0-1.0	Apparent	---	---	---	Brief	Occasional
		Mar-Apr	0.0-1.0	Apparent	---	---	---	---	---
		May-Nov	>6.0	---	---	---	---	---	---
		Dec	0.0-1.0	Apparent	---	---	---	Brief	Occasional
BeB:									
Blanton	A								
		Jan-Apr	4.0-6.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
BfB:									
Blanton	A								
		Jan-Apr	4.0-6.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
Foxworth	A								
		Jan-Apr	4.0-6.0	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.6	Apparent	---	---	---	---	None
CAA:									
Chastain	D								
		Jan-Apr	0.0-1.0	Apparent	---	---	---	Very long	Frequent
		May-Jun	0.0-1.0	Apparent	---	---	---	---	---
		Jul-Oct	>6.0	---	---	---	---	---	---
		Nov-Dec	0.0-1.0	Apparent	---	---	---	Very long	Frequent
Tawcaw	C								
		Jan-Apr	1.5-2.5	Apparent	---	---	---	Brief	Frequent
		May-Oct	---	---	---	---	---	---	---
		Nov-Dec	1.5-2.5	Apparent	---	---	---	Brief	Frequent
ChA:									
Chipley	C								
		Jan-Apr	2.0-3.0	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	2.0-3.0	Apparent	---	---	---	---	None
CnA:									
Clarendon	C								
		Jan-Mar	2.0-3.0	Apparent	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	2.0-3.0	Apparent	---	---	---	---	None
CoB:									
Cowarts	C								
		Jan-Dec	>6.0	---	---	---	---	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	Water table: Upper limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft		*Ft*				
CtB:									
Cowarts	C								
		Jan-Dec	>6.0	---	---	---	---	---	None
Gritney	C								
		Jan-Apr	1.5-3.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.5-3.0	Perched	---	---	---	---	None
Urban land	---								
		Jan-Dec	---	---	---	---	---	---	None
CuD:									
Cowarts	C								
		Jan-Dec	>6.0	---	---	---	---	---	None
Uchee	A								
		Jan-Mar	3.5-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.5-5.0	Perched	---	---	---	---	None
Blanton	A								
		Jan-Apr	4.0-6.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
DcA:									
Dothan	B								
		Jan-Mar	3.0-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.0-5.0	Perched	---	---	---	---	None
Clarendon	C								
		Jan-Mar	2.0-3.0	Apparent	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	2.0-3.0	Apparent	---	---	---	---	None
DnA:									
Dothan	B								
		Jan-Mar	3.0-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.0-5.0	Perched	---	---	---	---	None
Norfolk	B								
		Jan-Mar	4.0-6.0	Apparent	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Apparent	---	---	---	---	None
DnB:									
Dothan	B								
		Jan-Mar	3.0-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.0-5.0	Perched	---	---	---	---	None
Norfolk	B								
		Jan-Mar	4.0-6.0	Apparent	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Apparent	---	---	---	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft		*Ft*				
EuA:									
Eulonia	C								
		Jan-Apr	1.5-3.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.5-3.5	Apparent	---	---	---	---	None
FoA:									
Foxworth	A								
		Jan-Apr	4.0-6.0	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.6	Apparent	---	---	---	---	None
FuA:									
Fuquay	B								
		Jan-Mar	4.0-6.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
GCA:									
Grady	D								
		Jan-Jun	0	Apparent	0.0-2.0	Long	Frequent	---	None
		Jul-Nov	---	---	0.0-2.0	Long	Frequent	---	None
		Dec	0	Apparent	0.0-2.0	Long	Frequent	---	None
Croatan	D								
		Jan-Dec	0	Apparent	0.0-3.0	Very long	Frequent	---	None
GrB:									
Gritney	C								
		Jan-Apr	1.5-3.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.5-3.0	Perched	---	---	---	---	None
HMA:									
Herod	D								
		Jan-Mar	0.0-1.0	Apparent	---	---	---	Brief	Frequent
		Apr	---	---	---	---	---	Brief	Frequent
		May-Oct	---	---	---	---	---	---	---
		Nov	---	---	---	---	---	Brief	Frequent
		Dec	0.0-1.0	Apparent	---	---	---	Brief	Frequent
Muckalee	D								
		Jan-Mar	0.0-1.0	Apparent	---	---	---	Brief	Frequent
		Apr	---	---	---	---	---	Brief	Frequent
		May-Oct	---	---	---	---	---	---	---
		Nov	---	---	---	---	---	Brief	Frequent
		Dec	0.0-1.0	Apparent	---	---	---	Brief	Frequent
KBA:									
Kinston	D								
		Jan-Apr	0.0-1.0	Apparent	---	---	---	Long	Frequent
		May-Oct	>6.0	---	---	---	---	---	---
		Nov-Dec	0.0-1.0	Apparent	---	---	---	Long	Frequent
Bibb	D								
		Jan-Apr	0.0-1.0	Apparent	---	---	---	Long	Frequent
		May-Oct	>6.0	---	---	---	---	---	---
		Nov-Dec	0.0-1.0	Apparent	---	---	---	Long	Frequent
LaC:									
Lakeland	A								
		Jan-Dec	>6.0	---	---	---	---	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	Water table: Upper limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft		*Ft*				
LeA:									
Leefield	C								
		Jan-Apr	1.5-2.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.5-2.5	Apparent	---	---	---	---	None
MeB:									
Meldrim	A								
		Jan-May	2.5-3.3	Apparent	---	---	---	---	None
		Jun-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	2.5-3.3	Apparent	---	---	---	---	None
NaB:									
Nankin	C								
		Jan-Dec	>6.0	---	---	---	---	---	None
NcC2:									
Nankin	C								
		Jan-Dec	>6.0	---	---	---	---	---	None
Cowarts	C								
		Jan-Dec	>6.0	---	---	---	---	---	None
OcA:									
Ocilla	C								
		Jan-Apr	1.0-2.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.0-2.5	Apparent	---	---	---	---	None
PeA:									
Pelham	B/D								
		Jan-May	0.0-1.0	Apparent	---	---	---	---	None
		Jun-Nov	>6.0	---	---	---	---	---	None
		Dec	0.0-1.0	Apparent	---	---	---	---	None
PkA:									
Pickney	A/D								
		Jan-Jun	0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
		Jul	---	---	---	---	---	Long	Frequent
		Aug-Oct	---	---	---	---	---	---	---
		Nov-Dec	0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
RaA:									
Rains	B/D								
		Jan-Apr	0.0-1.0	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	0.0-1.0	Apparent	---	---	---	---	None
RbF:									
Remlik	B								
		Jan-Dec	>6.0	---	---	---	---	---	None
Blanton	A								
		Jan-Apr	4.0-6.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
RgA:									
Rigdon	B/D								
		Jan-Apr	1.5-2.5	Apparent	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	1.5-2.5	Apparent	---	---	---	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Months	Water table: Upper limit	Water table: Kind	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft		*Ft*				
StA:									
Stilson	B								
		Jan-Apr	2.5-3.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	2.5-3.5	Apparent	---	---	---	---	None
SuA:									
Surrency	D								
		Jan-Apr	0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
		May-Oct	0.0-0.5	Apparent	---	---	---	---	---
		Nov-Dec	0	Apparent	0.0-1.0	Long	Frequent	Long	Frequent
UaB:									
Uchee	A								
		Jan-Mar	3.5-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.5-5.0	Perched	---	---	---	---	None
UbC:									
Uchee	A								
		Jan-Mar	3.5-5.0	Perched	---	---	---	---	None
		Apr-Nov	>6.0	---	---	---	---	---	None
		Dec	3.5-5.0	Perched	---	---	---	---	None
Blanton	A								
		Jan-Apr	4.0-6.0	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	4.0-6.0	Perched	---	---	---	---	None
UrB:									
Udorthents	---								
		Jan-Dec	---	---	---	---	---	---	None

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			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		In	*In*		
AbA:					
Albany	---	---	---	High	High
BdA:					
Bladen	---	---	---	High	High
BeB:					
Blanton	---	---	---	Moderate	High
BfB:					
Blanton	---	---	---	Moderate	High
Foxworth	---	---	---	Low	High
CAA:					
Chastain	---	---	---	High	High
Tawcaw	---	---	---	High	High
ChA:					
Chipley	---	---	---	Low	High
CnA:					
Clarendon	---	---	---	High	Moderate
CoB:					
Cowarts	---	---	---	Moderate	Moderate
CtB:					
Cowarts	---	---	---	Moderate	Moderate
Gritney	---	---	---	High	High
Urban land	---	---	---	High	---
CuD:					
Cowarts	---	---	---	Moderate	Moderate
Uchee	---	---	---	Moderate	High
Blanton	---	---	---	Moderate	High
DcA:					
Dothan	---	---	---	High	Moderate
Clarendon	---	---	---	High	Moderate
DnA:					
Dothan	---	---	---	High	Moderate
Norfolk	---	---	---	Moderate	High
DnB:					
Dothan	---	---	---	High	Moderate
Norfolk	---	---	---	Moderate	High
EuA:					
Eulonia	---	---	---	High	High

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		In	*In*		
FoA:					
Foxworth	---	---	---	Low	High
FuA:					
Fuquay	---	---	---	Moderate	Moderate
GCA:					
Grady	---	---	---	High	High
Croatan	---	---	---	Moderate	High
GrB:					
Gritney	---	---	---	High	High
HMA:					
Herod	---	---	---	High	Moderate
Muckalee	---	---	---	High	Moderate
KBA:					
Kinston	---	---	---	High	Moderate
Bibb	---	---	---	High	High
LaC:					
Lakeland	---	---	---	Low	High
LeA:					
Leefield	---	---	---	High	High
MeB:					
Meldrim	---	---	---	High	High
NaB:					
Nankin	---	---	---	Moderate	Moderate
NcC2:					
Nankin	---	---	---	Moderate	Moderate
Cowarts	---	---	---	Moderate	Moderate
OcA:					
Ocilla	---	---	---	High	Moderate
PeA:					
Pelham	---	---	---	Moderate	High
PkA:					
Pickney	---	---	---	Low	High
RaA:					
Rains	---	---	---	High	High
RbF:					
Remlik	---	---	---	Moderate	Moderate
Blanton	---	---	---	Moderate	High
RgA:					
Rigdon	---	---	---	Low	High
StA:					
Stilson	---	---	---	High	High

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		In	*In*		
SuA:					
Surrency	---	---	---	Moderate	High
UaB:					
Uchee	---	---	---	Moderate	High
UbC:					
Uchee	---	---	---	Moderate	High
Blanton	---	---	---	Moderate	High
UrB:					
Udorthents	---	---	---	High	---
W:					
Water	---	---	---	High	---

Table 18.--Taxonomic Classification of the Soils

Soil name	Family or higher taxonomic class
Albany	Loamy, siliceous, subactive, thermic Aquic Arenic Paleudults
Bibb	Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents
Bladen	Fine, mixed, semiactive, thermic Typic Albaquults
Blanton	Loamy, siliceous, semiactive, thermic Grossarenic Paleudults
Chastain	Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts
Chipley	Thermic, coated Aquic Quartzipsamments
Clarendon	Fine-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults
Cowarts	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Croatan	Loamy, siliceous, dysic, thermic Terric Haplosaprists
Dothan	Fine-loamy, kaolinitic, thermic Plinthic Kandiudults
Eulonia	Fine, mixed, subactive, thermic Aquic Hapludults
Foxworth	Thermic, coated Typic Quartzipsamments
Fuquay	Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults
Grady	Fine, kaolinitic, thermic Typic Paleaquults
Gritney	Fine, mixed, semiactive, thermic Aquic Hapludults
Herod	Fine-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents
Kinston	Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts
Lakeland	Thermic, coated Typic Quartzipsamments
Leefield	Loamy, siliceous, subactive, thermic Arenic Plinthaquic Paleudults
Meldrim	Loamy, siliceous, semiactive, thermic Oxyaquic Paleudults
Muckalee	Coarse-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents
Nankin	Fine, kaolinitic, thermic Typic Kanhapludults
Norfolk	Fine-loamy, kaolinitic, thermic Typic Kandiudults
Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Pelham	Loamy, siliceous, subactive, thermic Arenic Paleaquults
Pickney	Sandy, siliceous, thermic Cumulic Humaquepts
Rains	Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults
Remlik	Loamy, siliceous, subactive thermic Arenic Hapludults
Rigdon	Sandy, siliceous, thermic Oxyaquic Alorthods
Stilson	Loamy, siliceous, subactive, thermic Oxyaquic Paleudults
Surrency	Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults
Tawcaw	Fine, kaolinitic, thermic Fluvaquentic Dystrudepts
Uchee	Loamy, kaolinitic, thermic Arenic Kanhapludults
Udorthents	Udorthents

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