



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

In cooperation with  
the University of Florida,  
Institute of Food and  
Agricultural Sciences,  
Agricultural Experiment  
Stations, and  
Soil and Water Science  
Department

# Soil Survey of Washington County, Florida





# How To Use This Soil Survey

## General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

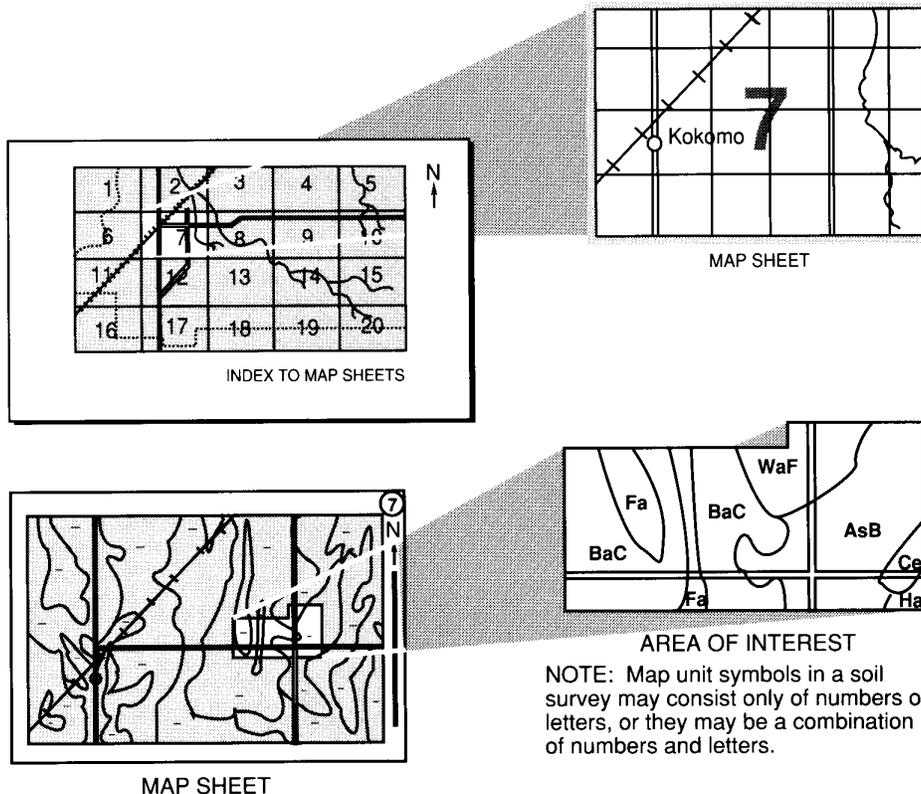
## Detailed Soil Maps

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

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

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

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



## National Cooperative Soil Survey

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

Major fieldwork for this soil survey was done from 2005 to 2008. Soil names and descriptions were approved in 2008. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2008. The most current official soil survey data are available at <http://websoilsurvey.nrcs.usda.gov/app/>.

This survey was made cooperatively by the Natural Resources Conservation Service and the University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations, and Soil and Water Science Department. It is part of the technical assistance furnished to the Orange Hill Soil and Water Conservation District.

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.

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## Cover Caption

A peanut field in an area of Dothan loamy sand, 2 to 5 percent slopes. This map unit is well suited to cultivated crops and qualifies as prime farmland.

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

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# Foreword

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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.

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

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

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each map unit 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.

Russell Morgan  
State Conservationist  
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# Soil Survey of Washington County, Florida

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By Milton Martinez, Natural Resources Conservation Service

Fieldwork by Milton Martinez, Robert W. Weatherspoon, Andrew Williams, Willie Nelson, Martin Figueroa, Victoria Gardner, and Mikel Williams, Natural Resources Conservation Service

United States Department of Agriculture,  
Natural Resources Conservation Service,  
in cooperation with  
the University of Florida,  
Institute of Food and Agricultural Sciences,  
Agricultural Experiment Stations, and  
Soil and Water Science Department

WASHINGTON COUNTY is in the Florida panhandle about 80 miles west of Tallahassee and 50 miles north of Panama City (fig. 1). The county has a total area of 393,800 acres, or 580 square miles.

Washington County is bordered on the north by Holmes and Jackson Counties, on the west by the Choctawhatchee River and Walton County, on the south by Bay County, and on the east by Jackson County. The one major river basin in the county is the Choctawhatchee River basin.

Washington County ranks 53rd in population out of the 67 counties in Florida. In 2000, the estimated population of the county was 20,973. The county seat is Chipley. In 2007, the estimated population of Chipley was 3,727 (Florida Legislature, 2009). The four other incorporated communities in the county are Caryville, Ebro, Vernon, and Wausau.

This soil survey updates an earlier survey of Washington County published in 1965 (Huckle and Weeks, 1965). It provides additional information, uses the latest taxonomy, and is available in a digital format.

## General Nature of the Survey Area

This section provides general information about the survey area. It describes climate, history and development, farming, recreation, and transportation.

### Climate

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

The climate tables were created using data from a climate station at Chipley, Florida.

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

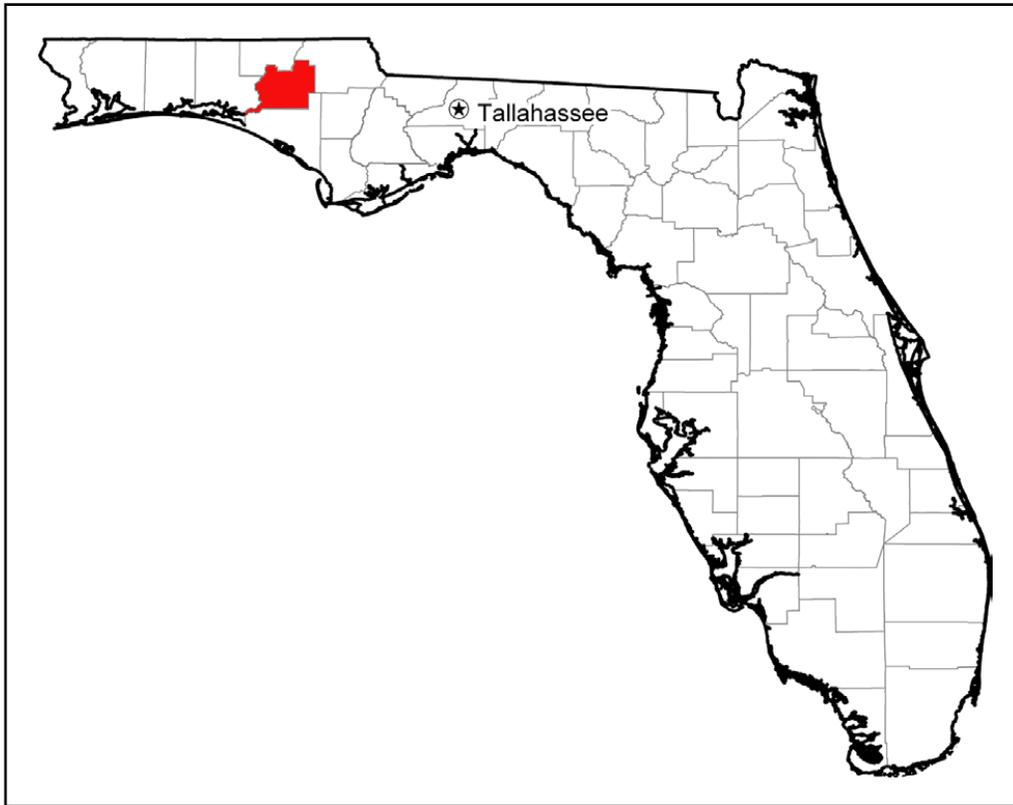


Figure 1.—Location of Washington County in Florida.

In winter, the average temperature is 52.4 degrees F and the average daily minimum temperature is 40.3 degrees. The lowest temperature on record, which occurred on January 21, 1985, is 2 degrees. In summer, the average temperature is 80.4 degrees and the average daily maximum temperature is 90.7 degrees. The highest recorded temperature, which occurred on June 7, 1985, is 104 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 (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 59 inches. Of this, 31 inches, or 52 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 15 inches. The heaviest 1-day rainfall during the period of record was 6.83 inches on June 9, 1989. Thunderstorms occur on about 82 days each year, and most occur in May and August.

The average seasonal snowfall is about 0.1 inch. The greatest snow depth at any one time during the period of record was 1.5 inches. On the average, less than one day per year has at least 1 inch of snow on the ground.

The average relative humidity in mid-afternoon is about 45 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The sun shines 62 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south from February to July and from the northeast in all other months. Average wind speed is highest, 8 miles per hour, in February and March.

## History and Development

Washington County was established in 1825. It was named in honor of George Washington, the first President of the United States.

The area was first settled by those seeking economic and political freedom. At the time of settlement, the area was a frontier with vast timber and mineral resources. River settlement was heavy due to inland waterway transportation. In the late 1800s, the arrival of railroads facilitated economic, social, and political developments. Over more than 175 years, Washington County has had Native American, Spanish, and English cultural influences. Numerous Native American mounds are in the county, and evidence of strong settlements is still being discovered (Wikimedia Foundation, 2010).

The town of Vernon is near the geographic center of the county and derives its name from Mt. Vernon, which was George Washington's home in Virginia. The site of the town was also the site of a major Native American settlement. The county courthouse was located in Vernon during the early part of the twentieth century. In 1927, the county seat was moved to Chipley, which was a railroad town. Chipley is in the northeastern part of Washington County. It was founded about 1882 and was named in honor of railroad pioneer William Dudley Chipley. It grew up as a watering station for steam-driven locomotives.

Economic growth in Caryville, Chipley, Ebro, Vernon, and Wausau developed around forestry industries, such as mill work, turpentine production, and naval stores. Agriculture, livestock, poultry, and agribusiness were strong aspects of the maturing economy (Washington County Chamber of Commerce, 2009).

## Farming

Washington County is a tree producing, farming, and livestock producing area. The majority of the farms are around Chipley. In 2007, about 73,836 acres, or 19 percent of the county, was used for crops and pasture (USDA-NASS, 2007).

Of the acreage of farmland, 46 percent is woodland, 31 percent is cropland, 13 percent is permanent pasture, and 10 percent is used for livestock, nurseries, or other uses.

The main agricultural crops are soybean, peanuts, corn, grains, watermelons, and vegetables. These crops represent about 19,082 acres of cropland and 18,377 acres of pastureland. The main grasses used for grazing and hay are improved bahiagrass and improved bermudagrass.

## Recreation

A variety of recreational activities are available in Washington County, including fishing, swimming, hiking, boating, canoeing, and horseback riding. Public boat ramps allow access to the major waterways and lakes. Picnic areas are adjacent to some of the boat ramps. Several wildlife management areas provide hunting opportunities.

Washington County is the location of one of the most unique landmarks in Florida. Falling Waters State Park is home to the tallest waterfall in the state and to a unique geological setting of sinks and caves. The park is 3 miles south of Chipley, off State Road 77A.

## Transportation

The major highways serving Washington County are Interstate 10, Florida State Roads 278 and 280, and US Highway 90 for east-west travel and Florida Highways 77 and 79 for north-south travel.

The CSX Railroad System runs through Chipley and provides Amtrak service to Jacksonville to the east and Pensacola to the west. There is no local airport in Washington County. Panama City-Bay County Airport and Dothan Municipal Airport

provide commercial air service. The Tri-County Airport provides small terminal facilities for light, general aviation.

## **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.

## Soil Survey of Washington County, Florida

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

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

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



# General Soil Map Units

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The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

## 1. Lakeland

*Dominantly nearly level to steep, excessively drained soils that are sandy throughout and that have lamellae deep in some profiles; on hills, ridges, and hillslopes that are highly dissected in some places*

### **Setting**

*Location in the survey area:* Southern and southeastern parts

*Landscape:* Lower and middle Coastal Plain

*Landform position:* Broad ridges and hillslopes

*Slope:* 0 to 45 percent

### **Composition**

*Percent of the survey area:* 26.5

Lakeland soils: 85 percent

Minor soils: 15 percent, including Blanton, Chipley, Rutlege, and Troup soils

### **Soil Characteristics**

#### **Lakeland**

*Surface layer:* Brown sand

*Subsoil:* Upper part—olive yellow sand; lower part—yellow and brownish yellow sand

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 72 inches

*Slope:* 0 to 45 percent

#### **Minor soils**

- Blanton soils, which are in positions similar to those of the Lakeland soils but are moderately well drained
- Chipley soils, which are in the lower positions and are somewhat poorly drained

- Rutlege soils, which are in stream bottoms and are poorly drained or very poorly drained
- Troup soils, which are in positions similar to those of the Lakeland soils but have a loamy layer at a depth of 40 to 80 inches

### **Land Use**

*Major uses:* Forestland and cultivated crops

## **2. Albany-Chipley-Leon**

*Dominantly somewhat poorly drained and poorly drained soils that have a sandy surface layer and a loamy subsoil; on knolls and rises*

### **Setting**

*Location in the survey area:* Scattered throughout, typically adjacent to streams

*Landscape:* Lower Coastal Plain

*Landform position:* Knolls and low rises that are slightly higher than the adjacent flatwoods; flats of the Gulf Flatwoods

*Slope:* 0 to 5 percent

### **Composition**

*Percent of the survey area:* 10.6

Albany soils: 50 percent

Chipley soils: 20 percent

Leon soils: 15 percent

Minor soils: 15 percent, including Dothan, Fuquay, Goldsboro, and Lakeland soils

### **Soil Characteristics**

#### **Albany**

*Surface layer:* Dark grayish brown loamy sand

*Subsurface layer:* Upper part—light olive brown and light yellowish brown sand that has reddish yellow and light gray mottles; lower part—light gray sand that has reddish yellow, light yellowish brown, and brownish yellow mottles

*Subsoil:* Upper part—light gray fine sandy loam that has pale yellow and reddish yellow mottles; lower part—light gray fine sandy loam that has brownish yellow, reddish yellow, and red mottles

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Apparent, at a depth of 12 to 42 inches from January through March and from July through September

*Slope:* 0 to 5 percent

#### **Chipley**

*Surface layer:* Dark gray fine sand

*Substratum:* Upper part—light yellowish brown sand; next part—light gray and pale yellow sand that has strong brown and brownish yellow mottles; lower part—white sand that has reddish yellow mottles

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Apparent, at a depth of 18 to 42 inches from January through March and from July through September

*Slope:* 0 to 5 percent

#### **Leon**

*Surface layer:* Dark grayish brown sand

*Subsurface layer:* Light gray sand

*Subsoil:* Dark brown sand

*Substratum:* Upper part—dark yellowish brown sand; next part—mixed very dark brown and dark yellowish brown sand; lower part—light gray sand

*Drainage class:* Poorly drained

*Seasonal high water table:* Apparent, at a depth of 6 to 18 inches from January through March and from July through September

*Slope:* 0 to 2 percent

#### **Minor soils**

- Lakeland soils, which are in the higher positions, are excessively drained, and are sandy throughout
- Dothan and Fuquay soils, which are in the higher positions and are well drained
- Goldsboro soils, which are in positions similar to those of the major soils but have a loamy layer within a depth of 20 inches

#### **Land Use**

*Major uses:* Forestland, wildlife habitat, and cultivated crops

### **3. Dothan-Fuquay-Bonifay**

*Dominantly nearly level to strongly sloping, well drained soils that have a loamy surface layer and subsoil; on flats, ridges, and knolls*

#### **Setting**

*Location in the survey area:* Northern part

*Landscape:* Lower Coastal Plain

*Landform position:* Hills, ridges, and hillslopes

*Slope:* 0 to 8 percent

#### **Composition**

*Percent of the survey area:* 29.3

Dothan soils: 45 percent

Fuquay soils: 20 percent

Bonifay soils: 20 percent

Minor soils: 15 percent, including Albany, Blanton, and Leefield soils

#### **Soil Characteristics**

##### **Dothan**

*Surface layer:* Brown loamy sand

*Subsurface layer:* Yellowish brown loamy fine sand

*Subsoil:* Upper part—brownish yellow sandy clay loam; lower part—mottled brownish yellow, yellowish brown, and light brownish gray sandy clay loam that has about 10 percent, by volume, nodular plinthite

*Drainage class:* Well drained

*Seasonal high water table:* Perched, at a depth of 42 to 60 inches from January through March and from July through September

*Slope:* 0 to 8 percent

##### **Fuquay**

*Surface layer:* Brown sand

*Subsurface layer:* Brownish yellow sand and loamy sand

*Subsoil:* Upper part—reddish yellow sandy clay loam that has light brownish gray mottles; next part—strong brown and yellowish brown sandy clay loam that has light gray mottles and about 7 percent, by volume, nodular plinthite; lower part—mixed strong brown and yellowish brown sandy clay loam that has light gray mottles and about 15 percent, by volume, nodular plinthite

*Drainage class:* Well drained

*Seasonal high water table:* Perched, at a depth of 48 to 60 inches from January through March and from July through September

*Slope:* 0 to 8 percent

#### **Bonifay**

*Surface layer:* Dark grayish brown sand

*Subsurface layer:* Yellowish brown to brownish yellow sand to loamy sand

*Subsoil:* Light yellowish brown sandy clay loam that has strong brown and red mottles and about 20 percent, by volume, nodular plinthite

*Drainage class:* Well drained

*Seasonal high water table:* Perched, at a depth of 60 to 72 inches from January through March and from August through September

*Slope:* 0 to 8 percent

#### **Minor soils**

- Albany soils, which are in the lower positions and are somewhat poorly drained
- Blanton and Leefield soils, which are in the slightly lower positions, are moderately well drained and somewhat poorly drained, and have a loamy layer below a depth of 40 inches

#### **Land Use**

*Major uses:* Cultivated crops and forestland

## **4. Blanton-Bonneau-Lakeland**

*Dominantly moderately well drained to excessively drained soils that have a sandy surface layer and a loamy subsoil; on hillslopes, knolls, and ridges*

#### **Setting**

*Location in the survey area:* Central parts and adjacent to the Choctawhatchee River

*Landscape:* Middle and lower Coastal Plain

*Landform position:* Broad ridges, marine terraces, and hillslopes

*Slope:* 0 to 45 percent

#### **Composition**

*Percent of the survey area:* 9.4

Blanton soils: 50 percent

Bonneau soils: 20 percent

Lakeland soils: 15 percent

Minor soils: 15 percent, including Dothan, Fuquay, and Goldsboro soils

#### **Soil Characteristics**

##### **Blanton**

*Surface layer:* Dark gray sand

*Subsurface layer:* Upper part—yellowish brown sand; lower part—brown sand

*Subsoil:* Upper part—yellowish brown sandy loam that has pale brown mottles; lower part—pale brown sandy loam that has white mottles and a few strong brown nodules of plinthite

*Drainage class:* Moderately well drained

*Seasonal high water table:* Apparent, at a depth of 42 to 66 inches from January through March and from July through September

*Slope:* 0 to 45 percent

##### **Bonneau**

*Surface layer:* Dark brown sand

*Subsurface layer:* Yellowish brown sand

*Subsoil:* Upper part—yellowish brown sandy loam; next part—very pale brown sandy loam; lower part—light brownish gray sandy clay loam that has strong brown streaks and very pale brown pockets of sandy loam

*Drainage class:* Well drained

*Seasonal high water table:* Apparent, at a depth of 42 to 72 inches from December through April and from August through September

*Slope:* 0 to 8 percent

### **Lakeland**

*Surface layer:* Brown sand

*Subsoil:* Upper part—brownish yellow sand; lower part—yellow sand

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 72 inches

*Slope:* 0 to 45 percent

### **Minor soils**

- Dothan and Fuquay soils, which are in the higher positions and are well drained
- Goldsboro soils, which are in positions similar to those of the major soils but have a loamy layer within a depth of 20 inches

### **Land Use**

*Major uses:* Forestland and cultivated crops

## **5. Goldsboro-Lynchburg-Dunbar**

*Dominantly nearly level and gently sloping, moderately well drained and somewhat poorly drained soils that have a loamy surface layer and subsoil; on knolls, rises, and flats*

### **Setting**

*Location in the survey area:* Western part, adjacent to Holmes Creek

*Landscape:* Middle and lower Coastal Plain

*Landform position:* Goldsboro—knolls and rises; Lynchburg and Dunbar—marine terraces and flats

*Slope:* 0 to 5 percent

### **Composition**

*Percent of the survey area:* 12.7

Goldsboro soils: 45 percent

Lynchburg soils: 20 percent

Dunbar soils: 20 percent

Minor soils: 15 percent, including Albany, Blanton, Dothan, and Rains soils

### **Soil Characteristics**

#### **Goldsboro**

*Surface layer:* Very dark grayish brown loamy sand

*Subsurface layer:* Light olive brown loamy sand

*Subsoil:* Upper part—olive yellow sandy clay loam; next part—light yellowish brown sandy clay loam that has yellowish red, strong brown, and light brownish gray mottles; lower part—grayish brown sandy clay loam that has red, strong brown, light yellowish brown, and light brownish gray mottles

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of 24 to 36 inches from December through April and from August through September

*Slope:* 0 to 5 percent

**Lynchburg**

*Surface layer:* Very dark gray loamy fine sand

*Subsurface layer:* Olive brown loamy sand

*Subsoil:* Upper part—light olive brown sandy clay loam that has yellowish brown, yellowish red, and brownish gray mottles; next part—gray sandy clay loam that has reddish brown, yellowish brown, brown, and yellowish red mottles; lower part—gray sandy clay that has reddish yellow mottles

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Perched, at a depth of 6 to 18 inches from January through March and from July through September

*Slope:* 0 to 5 percent

**Dunbar**

*Surface layer:* Dark grayish brown loamy sand

*Subsoil:* Upper part—light yellowish brown clay loam that has dark gray mottles; next part—light brownish gray to gray sandy clay to clay loam having yellowish brown, yellowish red, and brown mottles; lower part—light gray sandy clay

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Perched, at a depth of 12 to 24 inches from November through May

*Slope:* 0 to 5 percent

**Minor soils**

- Albany soils, which are in the lower positions and are somewhat poorly drained
- Blanton and Stilson soils, which are in the slightly lower positions, are moderately well drained, and have a loamy layer below a depth of 40 inches
- Dothan soils, which are in the higher positions and are well drained
- Rains soils, which are in positions similar to those of the major soils but have a loamy subsoil within a depth of 20 inches

**Land Use**

*Major uses:* Forestland and cultivated crops

**6. Rutlege-Pickney-Pamlico**

*Dominantly nearly level, very poorly drained soils that have a loamy, sandy, or mucky surface layer and a sandy or loamy subsoil; on flood plains and in depressions*

**Setting**

*Location in the survey area:* Throughout, along creeks and rivers

*Landscape:* Lower Coastal Plain

*Landform position:* Stream bottoms and depressional areas

*Slope:* 0 to 2 percent

**Composition**

*Percent of the survey area:* 11.5

Rutlege soils: 50 percent

Pickney soils: 25 percent

Pamlico soils: 15 percent

Minor soils: 10 percent, including Blanton, Chipley, Dothan, and Rains soils

**Soil Characteristics**

**Rutlege**

*Surface layer:* Black and very dark grayish brown loamy sand

*Substratum:* Light gray sand

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*Drainage class:* Very poorly drained

*Seasonal high water table:* Apparent, at the surface to 12 inches above the surface from January through September

*Slope:* 0 to 2 percent

### **Pickney**

*Surface layer:* Black loamy sand and sand

*Substratum:* Upper part—very dark grayish brown sand; lower part—grayish brown to gray sand

*Drainage class:* Very poorly drained

*Seasonal high water table:* Apparent, at the surface to 12 inches above the surface from January through September

*Slope:* 0 to 2 percent

### **Pamlico**

*Surface layer:* Upper part—very dark gray and very dark grayish brown muck

*Substratum:* Gray sand

*Drainage class:* Very poorly drained

*Seasonal high water table:* Apparent, at the surface to 12 inches above the surface from January through September

*Slope:* 0 to 2 percent

### **Minor soils**

- Blanton and Stilson soils, which are in the slightly lower positions, are moderately well drained, and have a loamy layer below a depth of 40 inches
- Chipley soils, which are somewhat poorly drained
- Dothan soils, which are in the higher positions and are well drained
- Rains soils, which are in positions similar to those of the major soils but have a loamy subsoil within a depth of 20 inches

### ***Land Use***

*Major uses:* Wildlife habitat



# Detailed Soil Map Units

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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 non contrasting, 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.

Map unit design is based on the occurrence of each soil throughout a Major Land Resource Area (MLRA). MLRAs are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA–NRCS, 2006). In some cases, a soil may be of sufficient extent in this survey area to be listed as a minor component but not of sufficient extent to be mapped and described separately. Additional information regarding such soils may be found in surveys of nearby areas ([http://soils.usda.gov/survey/printed\\_surveys/](http://soils.usda.gov/survey/printed_surveys/)) and in official soil series descriptions (<http://soils.usda.gov/technical/classification/osd/index.html>).

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit.

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.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Orangeburg loamy sand, 2 to 5 percent slopes, is a phase of the Orangeburg 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. Nankin-Cowarts complex, 2 to 5 percent slopes, eroded, 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. Rains and Bayboro soils, depressional, 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 Pits part of Pits-Udorthents complex, reclaimed, 0 to 90 percent slopes, is an example.

Table 4 gives the acreage and proportionate extent of each map unit in the 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.

## **2—Rutlege, Pickney, and Pamlico soils, frequently flooded**

### ***Map Unit Composition***

#### **Major components**

Rutlege and similar soils: 40 percent

Pickney and similar soils: 25 percent

Pamlico and similar soils: 19 percent

#### **Contrasting inclusions**

Dorovan soils: 6 percent

Leon soils: 4 percent

Bibb soils: 3 percent

Plummer soils: 3 percent

### ***Component Descriptions***

#### **Rutlege**

*Geomorphic setting:* Flood plains and drainageways on marine terraces on coastal plains (fig. 2)

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand



**Figure 2.—The Choctawhatchee River in an area of Rutlege, Pickney, and Pamlico soils, frequently flooded. This map unit is very limited for many uses. For example, the construction of local roads and streets is very limited due to wet soil conditions and flooding in areas of the Pickney and Rutlege soils and wet soil conditions, flooding, and subsidence in areas of the Pamlico soil.**

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Sandy marine deposits, fluviomarine deposits, or both

*Flooding:* Frequent, year-around

*Shallowest depth to wet zone:* At the surface (January through September)

*Deepest depth to wet zone:* More than 6 feet (October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 3.7 percent

*Typical profile:*

Surface layer—0 to 10 inches; black and very dark grayish brown loamy sand

Substratum—10 to 80 inches; light gray sand

### **Pickney**

*Geomorphic setting:* Flood plains and drainageways on marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Sandy marine deposits, fluviomarine deposits, or both

*Flooding:* Frequent, year-around

*Shallowest depth to wet zone:* At the surface (January through September)

*Deepest depth to wet zone:* More than 6 feet (October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 5.6 percent

*Typical profile:*

Surface layer—0 to 20 inches; black loamy sand

Substratum—20 to 80 inches; very dark grayish brown, grayish brown, and gray sand

### **Pamlico**

*Geomorphic setting:* Flood plains on marine terraces on coastal plains; depressions in marine terraces on coastal plains

*Slope:* 0 to 1 percent

*Texture of the surface layer:* Muck

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material over sandy marine deposits

*Flooding:* Frequent, year-around

*Shallowest depth to wet zone:* At the surface (January through September)

*Deepest depth to wet zone:* More than 6 feet (October through December)

*Deepest ponding:* 1 foot (January through September)

*Available water capacity to a depth of 60 inches:* Very high

*Content of organic matter in the upper 10 inches:* 40.0 percent

*Typical profile:*

Surface layer—0 to 40 inches; very dark gray and very dark grayish brown muck

Substratum—40 to 80 inches; gray sand

## **4—Gritney loamy sand, 2 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Gritney and similar soils: 86 percent

#### **Contrasting inclusions**

Goldsboro soils: 14 percent

### ***Component Description***

#### **Gritney**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes and interfluves

*Position on the landform:* Shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Surface layer—0 to 9 inches; dark olive brown loamy sand

Subsoil—9 to 35 inches; brownish yellow clay

Subsoil—35 to 45 inches; yellowish brown sandy clay

Subsoil—45 to 80 inches; light brownish gray, dark red, and yellowish brown sandy clay loam that has gray mottles

## 7—Bladen-Dunbar complex, occasionally flooded

### *Map Unit Composition*

#### **Major components**

Bladen and similar soils: 60 percent

Dunbar and similar soils: 25 percent

#### **Contrasting inclusions**

Rains soils: 8 percent

Lynchburg soils: 5 percent

Goldsboro soils: 2 percent

### *Component Descriptions*

#### **Bladen**

*Geomorphic setting:* Flats on flood plains on marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Poorly drained

*Parent material:* Loamy and clayey alluvium

*Months in which flooding does not occur:* April through June, October through December

*Highest frequency of flooding:* Occasional (January through March, July through September)

*Shallowest depth to wet zone:* At the surface (January through May, December)

*Deepest depth to wet zone:* More than 6 feet (June through November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

Surface layer—0 to 5 inches; very dark grayish brown sandy loam

Subsoil—5 to 30 inches; light brownish gray clay that has yellowish brown and yellow mottles

Subsoil—30 to 54 inches; light brownish gray clay that has yellowish red mottles

Subsoil—54 to 80 inches; light brownish gray clay that has red mottles

#### **Dunbar**

*Geomorphic setting:* Flood plains on marine terraces on coastal plains; flats on marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Clayey coastal plain deposits

*Months in which flooding does not occur:* April through June, October through December

*Highest frequency of flooding:* Occasional (January through March, July through September)

*Shallowest depth to wet zone:* 1 foot (January through May, November, December)

*Deepest depth to wet zone:* More than 7.7 feet (June through October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* High

*Content of organic matter in the upper 10 inches:* 3.0 percent

*Typical profile:*

Surface layer—0 to 10 inches; dark grayish brown loamy sand

Subsoil—10 to 20 inches; light yellowish brown clay loam that has dark gray mottles

Subsoil—20 to 35 inches; light brownish gray sandy clay that has yellowish brown mottles

Subsoil—35 to 55 inches; gray clay loam that has yellowish brown and yellowish red mottles

Subsoil—55 to 65 inches; gray sandy clay that has yellowish brown and brown mottles

Substratum—65 to 80 inches; light gray sandy clay

## **9—Albany-Chipley-Leon complex, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Albany and similar soils: 38 percent

Chipley and similar soils: 20 percent

Leon and similar soils: 16 percent

#### **Contrasting inclusions**

Clara soils: 6 percent

Ocilla soils: 6 percent

Pamlico soils: 6 percent

Osier soils: 3 percent

Plummer soils: 3 percent

Lynchburg soils: 2 percent

### ***Component Descriptions***

#### **Albany**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1 foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Very low

*Content of organic matter in the upper 10 inches:* 0.7 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark grayish brown loamy sand

Subsurface layer—3 to 50 inches; light olive brown and light yellowish brown sand that has reddish yellow and light gray mottles in the lower part

Subsurface layer—50 to 55 inches; light gray sand that has reddish yellow, yellowish brown, and brownish yellow mottles

Subsoil—55 to 80 inches; light gray fine sandy loam that has pale yellow and reddish yellow mottles in the upper part and has brownish yellow, reddish yellow, and red mottles in the lower part

**Chipley**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 2.8 percent

*Typical profile:*

Surface layer—0 to 8 inches; dark gray fine sand

Substratum—8 to 50 inches; light yellowish brown, light gray, and pale yellow sand that has strong brown and brownish yellow mottles

Substratum—50 to 80 inches; white sand that has reddish yellow mottles

**Leon**

*Geomorphic setting:* Flatwoods on marine terraces on coastal plains

*Geomorphic component:* Base slopes

*Position on the landform:* Toeslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* ½ foot (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

Surface layer—0 to 4 inches; dark grayish brown sand

Subsurface layer—4 to 10 inches; light gray sand that has very dark gray mottles

Subsoil—10 to 30 inches; dark brown sand

Subsoil—30 to 35 inches; light gray sand

Subsoil—35 to 51 inches; very dark brown and dark yellowish brown sand

Substratum—51 to 80 inches; light gray sand

**11—Dothan loamy sand, 0 to 2 percent slopes**

***Map Unit Composition***

**Major components**

Dothan and similar soils: 93 percent

**Contrasting inclusions**

Goldsboro soils: 7 percent

***Component Description***

**Dothan**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Interfluves

*Position on the landform:* Summits

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 8 inches; brown loamy sand

Subsurface layer—8 to 10 inches; yellowish brown loamy sand

Subsoil—10 to 35 inches; brownish yellow sandy clay loam

Subsoil—35 to 80 inches; brownish yellow, yellowish brown, and light brownish gray sandy clay loam that has more than 5 percent, by volume, plinthite nodules

**12—Dothan loamy sand, 2 to 5 percent slopes**

***Map Unit Composition***

**Major components**

Dothan and similar soils: 88 percent

**Contrasting inclusions**

Goldsboro soils: 5 percent

Norfolk soils: 3 percent

Esto soils: 2 percent

Tifton soils: 2 percent

***Component Description***

**Dothan**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes and interfluves

*Position on the landform:* Footslopes, backslopes, shoulders, and summits (fig. 3)

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None



**Figure 3.—A hayfield of bahiagrass in an area of Dothan loamy sand, 2 to 5 percent slopes. Dothan soils are well suited to forage and the production of cultivated crops. This map unit qualifies as prime farmland.**

*Available water capacity to a depth of 60 inches: Moderate*

*Content of organic matter in the upper 10 inches: 0.4 percent*

*Typical profile:*

Surface layer—0 to 7 inches; brown loamy sand

Subsoil—7 to 39 inches; brownish yellow sandy clay loam

Subsoil—39 to 80 inches; brownish yellow, yellowish brown, and light brownish gray sandy clay loam that has more than 5 percent, by volume, plinthite nodules

## **14—Dothan loamy sand, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Dothan and similar soils: 87 percent

#### **Contrasting inclusions**

Norfolk soils: 10 percent

Goldsboro soils: 3 percent

### ***Component Description***

#### **Dothan**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Well drained  
*Parent material:* Loamy marine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* 3 feet (January through April, August, September)  
*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Moderate  
*Content of organic matter in the upper 10 inches:* 0.4 percent  
*Typical profile:*  
Surface layer—0 to 6 inches; brown loamy sand  
Subsoil— 6 to 33 inches; brownish yellow sandy clay loam  
Subsoil—33 to 80 inches; brownish yellow, yellowish brown, and light brownish gray sandy clay loam that has more than 5 percent, by volume, plinthite nodules

## **18—Fuquay-Dothan complex, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Fuquay and similar soils: 55 percent

Dothan and similar soils: 25 percent

#### **Contrasting inclusions**

Bonifay soils: 8 percent

Blanton soils: 6 percent

Norfolk soils: 6 percent

### ***Component Descriptions***

#### **Fuquay**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy over loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 4 inches; brown sand

Subsurface layer—4 to 12 inches; brownish yellow sand

Subsurface layer—12 to 20 inches; brownish yellow loamy sand

Subsoil—20 to 80 inches; strong brown and yellowish brown sandy clay loam that has more than 5 percent, by volume, plinthite nodules

**Dothan**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.4 percent

*Typical profile:*

Surface layer—0 to 6 inches; brown loamy sand

Subsoil—6 to 30 inches; brownish yellow sandy clay loam

Subsoil—30 to 80 inches; brownish yellow, yellowish brown, and light brownish gray sandy clay loam that has more than 5 percent, by volume, plinthite nodules

**22—Nankin-Cowarts complex, 2 to 5 percent slopes, eroded**

***Map Unit Composition***

**Major components**

Nankin and similar soils: 52 percent

Cowarts and similar soils: 25 percent

**Contrasting inclusions**

Norfolk soils: 11 percent

Blanton soils: 7 percent

Dothan soils: 3 percent

Fuquay soils: 2 percent

***Component Descriptions***

**Nankin**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits and shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 5 inches; brown sandy loam

Subsoil—5 to 20 inches; brown sandy clay

## Soil Survey of Washington County, Florida

Subsoil—20 to 56 inches; yellowish red sandy clay loam  
Subsoil—56 to 68 inches; yellowish brown sandy clay loam  
Substratum—68 to 80 inches; yellowish brown, yellowish red, and pinkish gray sandy clay loam

### **Cowarts**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits and shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark grayish brown loamy sand

Subsoil—5 to 12 inches; brown sandy loam

Subsoil—12 to 25 inches; strong brown and yellowish brown sandy clay loam that has yellowish red and red mottles and 3 percent, by volume, nodular plinthite in the lower part

Substratum—25 to 80 inches; yellowish brown, reddish brown, light gray, and red sandy clay loam

## **23—Nankin-Cowarts complex, 5 to 8 percent slopes, eroded**

### ***Map Unit Composition***

#### **Major components**

Nankin and similar soils: 57 percent

Cowarts and similar soils: 21 percent

#### **Contrasting inclusions**

Norfolk soils: 10 percent

Blanton soils: 6 percent

Dothan soils: 4 percent

Fuquay soils: 2 percent

### ***Component Descriptions***

#### **Nankin**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 4 inches; brown sandy loam

Subsoil—4 to 18 inches; brown sandy clay

Subsoil—18 to 56 inches; yellowish red sandy clay loam

Subsoil—56 to 68 inches; yellowish brown sandy clay loam

Substratum—68 to 80 inches; yellowish brown, yellowish red, and pinkish gray sandy clay loam

### **Cowarts**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders and backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

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

Subsoil—4 to 7 inches; brown sandy loam

Subsoil—7 to 33 inches; strong brown and yellowish brown sandy clay loam that has yellowish red and red mottles and 3 percent, by volume, nodular plinthite in the lower part

Substratum—33 to 80 inches; yellowish brown, reddish brown, light gray, and red sandy clay loam

## **29—Dunbar loamy sand, 2 to 5 percent slopes, occasionally flooded**

### ***Map Unit Composition***

#### **Major components**

Dunbar and similar soils: 72 percent

#### **Contrasting inclusions**

Lynchburg soils: 13 percent

Leefield soils: 10 percent

Grady soils: 5 percent

### ***Component Description***

#### **Dunbar**

*Geomorphic setting:* Terraces on marine terraces on coastal plains

*Geomorphic component:* Treads

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Clayey coastal plain deposits

*Months in which flooding does not occur:* April through June, October through December

*Highest frequency of flooding:* Occasional (January through March, July through September)

*Shallowest depth to wet zone:* 1 foot (January through May, November, December)

*Deepest depth to wet zone:* More than 7.7 feet (June through October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* High

*Content of organic matter in the upper 10 inches:* 3.0 percent

*Typical profile:*

Surface layer—0 to 10 inches; dark grayish brown loamy sand

Subsoil—10 to 20 inches; light yellowish brown clay loam that has dark gray mottles

Subsoil—20 to 35 inches; light brownish gray sandy clay that has yellowish brown mottles

Subsoil—35 to 55 inches; gray clay loam that has yellowish brown mottles

Subsoil—55 to 65 inches; gray sandy clay that has yellowish brown and brown mottles

Substratum—65 to 80 inches; light gray sandy clay

## **35—Lucy-Troup complex, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lucy and similar soils: 45 percent

Troup soils: 42 percent

#### **Contrasting inclusions**

Bonifay soils: 8 percent

Fuquay soils: 5 percent

### ***Component Descriptions***

#### **Lucy**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 6 inches; dark yellowish brown sand

Subsurface layer—6 to 25 inches; brownish yellow loamy sand

Subsoil—25 to 31 inches; strong brown sandy loam

Subsoil—31 to 80 inches; red sandy clay loam

**Troup**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Surface layer—0 to 11 inches; brown sand

Subsurface layer—11 to 71 inches; dark yellowish brown and pale brown sand

Subsoil—71 to 80 inches; yellowish red sandy clay loam

**36—Troup-Lucy complex, 5 to 8 percent slopes**

***Map Unit Composition***

**Major components**

Troup and similar soils: 45 percent

Lucy and similar soils: 40 percent

**Contrasting inclusions**

Bonifay soils: 10 percent

Fuquay soils: 5 percent

***Component Descriptions***

**Troup**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Surface layer—0 to 10 inches; brown sand

Subsurface layer—10 to 55 inches; dark yellowish brown and pale brown sand

Subsoil—55 to 80 inches; yellowish red sandy clay loam

**Lucy**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.4 percent

*Typical profile:*

Surface layer—0 to 4 inches; dark yellowish brown sand

Subsurface layer—4 to 17 inches; brownish yellow loamy sand

Subsoil—17 to 26 inches; strong brown sandy loam

Subsoil—26 to 80 inches; red sandy clay loam

## **39—Bonifay-Fuquay complex, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Bonifay and similar soils: 50 percent

Fuquay and similar soils: 34 percent

#### **Contrasting inclusions**

Blanton soils: 8 percent

Lucy soils: 8 percent

### ***Component Descriptions***

#### **Bonifay**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 4½ feet (January through March, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (April through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark grayish brown sand

Subsurface layer—5 to 32 inches; yellowish brown and brownish yellow sand

Subsurface layer—32 to 50 inches; brownish yellow loamy sand that has strong brown and very pale brown mottles

Subsoil—50 to 80 inches; light yellowish brown sandy clay loam that has strong brown and red mottles in the lower part and has more than 20 percent, by volume, plinthite nodules

#### **Fuquay**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy over loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

Surface layer—0 to 7 inches; brown sand

Subsurface layer—7 to 31 inches; brownish yellow sand

Subsurface layer—31 to 36 inches; brownish yellow loamy sand

Subsoil—36 to 50 inches; reddish yellow sandy clay loam that has light brownish gray mottles

Subsoil—50 to 80 inches; strong brown and yellowish brown sandy clay loam that has more than 15 percent, by volume, plinthite nodules

## **40—Bonifay loamy sand, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Bonifay and similar soils: 80 percent

#### **Contrasting inclusions**

Blanton soils: 10 percent

Fuquay soils: 10 percent

### ***Component Description***

#### **Bonifay**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 4½ feet (January through March, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (April through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.7 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark grayish brown loamy sand

Subsurface layer—3 to 28 inches; yellowish brown and brownish yellow sand

Subsurface layer—28 to 43 inches; brownish yellow loamy sand that has strong brown and very pale brown mottles

Subsoil—43 to 80 inches; light yellowish brown sandy clay loam that has strong brown and red mottles in the lower part and has more than 20 percent, by volume, plinthite nodules

## 41—Lucy sand, 0 to 5 percent slopes

### *Map Unit Composition*

#### **Major components**

Lucy and similar soils: 70 percent

#### **Contrasting inclusions**

Blanton soils: 10 percent

Bonifay soils: 10 percent

Fuquay soils: 10 percent

### *Component Description*

#### **Lucy**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Surface layer—0 to 10 inches; dark yellowish brown sand

Subsurface layer—10 to 28 inches; brownish yellow loamy sand

Subsoil—28 to 35 inches; strong brown sandy loam

Subsoil—35 to 80 inches; red sandy clay loam

## 52—Grady loam, ponded

### *Map Unit Composition*

#### **Major components**

Grady and similar soils: 85 percent

#### **Contrasting inclusions**

Rains soils: 8 percent

Pantego soils: 7 percent

### *Component Description*

#### **Grady**

*Geomorphic setting:* Depressions in marine terraces on coastal plains (fig. 4)

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Clayey marine deposits



**Figure 4.**—An area of Grady loam, ponded. Areas of this map unit average less than 5 acres and are scattered across the northern part of the county. During the dry season, watermarks are visible on sweetbay, blackgum, sweetgum, and bald cypress, which are hardwoods. This unit is very limited for building site development, roads, lawns, and landscaping due to ponding and saturated soil conditions.

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (February through April)

*Deepest depth to wet zone:* More than 6 feet (October, November)

*Months in which ponding does not occur:* May, June, October through December

*Deepest ponding:* 2 feet (February through April)

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

Surface layer—0 to 8 inches; very dark gray loam

Subsoil—8 to 16 inches; dark grayish brown sandy clay loam

Subsoil—16 to 45 inches; light brownish gray clay

Subsoil—45 to 80 inches; light brownish gray clay that has yellowish brown and yellowish red mottles

## **54—Albany-Ocilla complex, 0 to 5 percent slopes, occasionally flooded**

### ***Map Unit Composition***

#### **Major components**

Albany and similar soils: 63 percent

Ocilla and similar soils: 24 percent

**Contrasting inclusions**

Chipley soils: 13 percent

**Component Descriptions**

**Albany**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* Occasional (January through April, July through September, December)

*Shallowest depth to wet zone:* 1 foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Very low

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark grayish brown loamy sand

Subsurface layer—3 to 53 inches; light olive brown and light yellowish brown sand that has reddish yellow and light gray mottles in the lower part

Subsoil—53 to 80 inches; light gray fine sandy loam that has pale yellow and reddish yellow mottles in the upper part and brownish yellow, reddish yellow, and red mottles in the lower part

**Ocilla**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Months in which flooding does not occur:* April through June, October through December

*Highest frequency of flooding:* Occasional (January through March, July through September)

*Shallowest depth to wet zone:* 1 foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark grayish brown sand

Subsurface layer—5 to 25 inches; light yellowish brown, very pale brown, and light yellowish brown sand that has brownish yellow and dark brown mottles in the upper part and reddish yellow, white, and light brownish gray mottles in the lower part

Subsoil—25 to 60 inches; strong brown, gray, and red sandy clay loam

Subsoil—60 to 80 inches; light brownish gray sandy clay loam that has red, yellowish brown, and strong brown mottles

## 55—Chipley-Albany-Hurricane complex, 0 to 5 percent slopes

### *Map Unit Composition*

#### **Major components**

Chipley and similar soils: 55 percent  
Albany and similar soils: 27 percent  
Hurricane and similar soils: 15 percent

#### **Contrasting inclusions**

Ocilla soils: 3 percent

### *Component Descriptions*

#### **Chipley**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders and summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 3.5 percent

*Typical profile:*

Surface layer—0 to 10 inches; dark gray fine sand

Substratum—10 to 49 inches; light yellowish brown, light gray, and pale yellow sand that has strong brown and brownish yellow mottles

Substratum—49 to 80 inches; white sand that has reddish yellow mottles

#### **Albany**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1 foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Very low

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 2 inches; dark grayish brown loamy sand

## Soil Survey of Washington County, Florida

Subsurface layer—2 to 51 inches; light olive brown and light yellowish brown sand that has reddish yellow and light gray mottles in the lower part  
Subsurface layer—51 to 53 inches; light gray sand that has reddish yellow, yellowish brown, and brownish yellow mottles  
Subsoil—53 to 80 inches; light gray fine sandy loam that has pale yellow and reddish yellow mottles in the upper part and brownish yellow, reddish yellow, and red mottles in the lower part

### **Hurricane**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (March)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Surface layer—0 to 6 inches; very dark gray sand

Subsurface layer—6 to 35 inches; light olive brown and light yellowish brown sand

Subsurface layer—35 to 55 inches; light gray sand that has reddish yellow and yellowish red mottles

Subsoil—55 to 80 inches; very dark grayish brown fine sand

## **56—Albany-Ocilla complex, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Albany and similar soils: 72 percent

Ocilla and similar soils: 16 percent

#### **Contrasting inclusions**

Leefield soils: 7 percent

Hurricane soils: 4 percent

Chipley soils: 1 percent

### ***Component Descriptions***

#### **Albany**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

## Soil Survey of Washington County, Florida

*Flooding:* None

*Shallowest depth to wet zone:* 1 foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 2 inches; dark grayish brown loamy sand

Subsurface layer—2 to 47 inches; light olive brown and light gray sand that has reddish yellow and light gray mottles in the upper part and reddish yellow, yellowish brown, and brownish yellow mottles in the lower part

Subsoil—47 to 80 inches; light gray fine sandy loam that has pale yellow and reddish yellow mottles in the upper part and brownish yellow, reddish yellow, and red mottles in the lower part

### **Ocilla**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1 foot (January through April, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through August, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark grayish brown sand

Subsurface layer—3 to 14 inches; light yellowish brown, very pale brown, and light yellowish brown sand that has brownish yellow and dark brown mottles in the upper part and reddish yellow, white, and light brownish gray mottles in the lower part

Subsoil—14 to 35 inches; strong brown, gray, and red sandy clay loam

Subsoil—35 to 80 inches; light brownish gray sandy clay loam that has red, yellowish brown, and strong brown mottles

## **57—Ocilla-Leefield complex, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Ocilla and similar soils: 70 percent

Leefield and similar soils: 18 percent

#### **Contrasting inclusions**

Albany soils: 6 percent

Hurricane soils: 5 percent

Chipley soils: 1 percent

### **Component Descriptions**

#### **Ocilla**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and footslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1 foot (January through April, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through August, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.6 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark grayish brown sand

Subsurface layer—5 to 39 inches; light yellowish brown, very pale brown, and light yellowish brown sand that has brownish yellow and dark brown mottles in the upper part and reddish yellow, white, and light brownish gray mottles in the lower part

Subsoil—39 to 62 inches; strong brown, gray, and red sandy clay loam

Subsoil—62 to 80 inches; light brownish gray sandy clay loam that has red, yellowish brown, and strong brown mottles

#### **Leefield**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes and backslopes

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

Surface layer—0 to 5 inches; very dark grayish brown loamy sand

Subsurface layer—5 to 30 inches; light olive brown and light yellowish brown loamy sand

Subsoil—30 to 33 inches; yellowish brown sandy loam that has yellowish brown and light brownish gray mottles

Subsoil—33 to 80 inches; yellowish brown and brown sandy clay loam that has strong brown and reddish brown mottles in the upper part, has brownish yellow, light gray, and yellowish red mottles in the lower part, and has about 10 percent, by volume, plinthite nodules

## 61—Lakeland sand, 8 to 12 percent slopes

### *Map Unit Composition*

#### **Major components**

Lakeland and similar soils: 74 percent

#### **Contrasting inclusions**

Blanton soils: 11 percent

Albany soils: 7 percent

Ocilla soils: 4 percent

Troup soils: 4 percent

### *Component Description*

#### **Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains (fig. 5)

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 8 to 12 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None



**Figure 5.—A paved road in an area of Lakeland sand, 8 to 12 percent slopes. Loamy fill is needed from an offsite location before paving in areas of the Lakeland soils. This map unit is not suited to cultivated crops because it is too droughty. It is very limited as a site for recreational development because it is too sandy.**

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 4 inches; brown sand

Substratum—4 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **62—Lakeland sand, 12 to 45 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lakeland and similar soils: 77 percent

#### **Contrasting inclusions**

Blanton soils: 10 percent

Troup soils: 13 percent

### ***Component Description***

#### **Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.3 percent

*Typical profile:*

Surface layer—0 to 2 inches; brown sand

Substratum—2 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **63—Lakeland sand, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lakeland and similar soils: 76 percent

#### **Contrasting inclusions**

Blanton soils: 10 percent

Foxworth soils: 8 percent

Albany soils: 2 percent

Bonifay soils: 2 percent

Troup soils: 2 percent

### ***Component Description***

#### **Lakeland**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Interfluves

*Position on the landform:* Summits

*Slope:* 0 to 5 percent  
*Texture of the surface layer:* Sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Excessively drained  
*Parent material:* Sandy eolian deposits, marine deposits, or both  
*Flooding:* None  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Low  
*Content of organic matter in the upper 10 inches:* 0.6 percent  
*Typical profile:*  
    Surface layer—0 to 7 inches; brown sand  
    Substratum—7 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **64—Lakeland sand, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lakeland and similar soils: 70 percent

#### **Contrasting inclusions**

Blanton soils: 12 percent

Bonifay soils: 5 percent

Troup soils: 13 percent

### ***Component Description***

#### **Lakeland**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

    Surface layer—0 to 6 inches; brown sand

    Substratum—6 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **67—Nankin-Cowarts-Lakeland complex, 5 to 12 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Nankin and similar soils: 52 percent

Cowarts and similar soils: 28 percent

Lakeland and similar soils: 17 percent

#### **Contrasting inclusions**

Bonneau soils: 2 percent

Blanton soils: 1 percent

### **Component Descriptions**

#### **Nankin**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders and backslopes

*Slope:* 5 to 12 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 3 inches; brown sandy loam

Subsoil—3 to 16 inches; brown sandy clay

Subsoil—16 to 56 inches; yellowish red sandy clay loam

Subsoil—56 to 71 inches; yellowish brown sandy clay loam

Substratum—71 to 80 inches; yellowish brown, yellowish red, and pinkish gray sandy clay loam

#### **Cowarts**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes and shoulders

*Slope:* 5 to 12 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

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

Subsoil—4 to 30 inches; strong brown and yellowish brown sandy clay loam that has yellowish red and red mottles and 3 percent, by volume, nodular plinthite in the lower part

Substratum—30 to 80 inches; yellowish brown, reddish brown, light gray, and red sandy clay loam

#### **Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 12 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 5 inches; brown sand

Substratum—5 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **68—Nankin-Cowarts-Lakeland complex, 12 to 45 percent slopes, eroded**

### ***Map Unit Composition***

#### **Major components**

Nankin and similar soils: 50 percent

Cowarts and similar soils: 30 percent

Lakeland and similar soils: 16 percent

#### **Contrasting inclusions**

Bonneau soils: 3 percent

Blanton soils: 1 percent

### ***Component Descriptions***

#### **Nankin**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 2 inches; brown sandy loam

Subsoil—2 to 14 inches; brown sandy clay

Subsoil—14 to 24 inches; yellowish red sandy clay loam

Subsoil—24 to 67 inches; yellowish brown sandy clay loam

Substratum—67 to 80 inches; yellowish brown, yellowish red, and pinkish gray sandy clay loam

#### **Cowarts**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3 feet (January through April, August, September)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark grayish brown loamy sand

Subsoil—3 to 18 inches; strong brown and yellowish brown sandy clay loam that has yellowish red and red mottles and 3 percent, by volume, nodular plinthite in the lower part

Substratum—18 to 80 inches; yellowish brown, reddish brown, light gray, and red sandy clay loam

### **Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.4 percent

*Typical profile:*

Surface layer—0 to 2 inches; brown sand

Substratum—2 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **71—Lynchburg loamy fine sand, 0 to 2 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lynchburg and similar soils: 90 percent

#### **Contrasting inclusions**

Leefield soils: 10 percent

### ***Component Description***

#### **Lynchburg**

*Geomorphic setting:* Marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Toeslopes

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1/2 foot (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

Surface layer—0 to 10 inches; very dark gray loamy fine sand

Subsurface layer—10 to 16 inches; olive brown loamy sand that has brown mottles

Subsoil—16 to 19 inches; light olive brown sandy clay loam that has yellowish brown, yellowish red, and light brownish gray mottles

Subsoil—19 to 60 inches; gray sandy clay loam that has reddish brown and yellowish brown mottles in the upper part and brown and yellowish red mottles in the lower part

Subsoil—60 to 80 inches; gray sandy clay that has reddish yellow mottles

## **72—Lynchburg loamy fine sand, 2 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Lynchburg and similar soils: 88 percent

#### **Contrasting inclusions**

Leefield soils: 12 percent

### ***Component Description***

#### **Lynchburg**

*Geomorphic setting:* Rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1/2 foot (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

Surface layer—0 to 5 inches; very dark gray loamy fine sand

Subsurface layer—5 to 10 inches; olive brown loamy sand that has brown mottles

Subsoil—10 to 25 inches; light olive brown sandy clay loam that has yellowish brown, yellowish red, and light brownish gray mottles

Subsoil—25 to 45 inches; gray sandy clay loam that has reddish brown and yellowish brown mottles in the upper part and brown and yellowish red mottles in the lower part

Subsoil—45 to 80 inches; gray sandy clay that has reddish yellow mottles

## 85—Searcy-Oktibbeha complex, 2 to 5 percent slopes

### *Map Unit Composition*

#### **Major components**

Searcy and similar soils: 56 percent

Oktibbeha and similar soils: 31 percent

#### **Contrasting inclusions**

Hannon soils: 13 percent

### *Component Descriptions*

#### **Searcy**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Clayey marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through April)

*Deepest depth to wet zone:* More than 6.7 feet (May through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* High

*Content of organic matter in the upper 10 inches:* 0.7 percent

*Typical profile:*

Surface layer—0 to 2 inches; very dark grayish brown sandy loam

Subsoil—2 to 5 inches; brown sandy clay loam

Subsoil—5 to 50 inches; yellowish red and red clay that has light gray mottles in the lower part

Subsoil—50 to 80 inches; red, yellowish brown, and light gray clay

#### **Oktibbeha**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Clay

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Clayey marine deposits over chalk

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 2.4 percent

*Typical profile:*

Surface layer—0 to 4 inches; brown clay

Subsoil—4 to 12 inches; yellowish red clay

Subsoil—12 to 30 inches; yellowish red and yellowish brown clay that has olive mottles in the upper part and gray mottles in the lower part

Subsoil—30 to 45 inches; dark yellowish brown clay that has light brownish gray mottles, white concretions of calcium carbonate, and soft white masses of calcium carbonate

Subsoil—45 to 80 inches; pale brown silty clay that has yellowish red, strong brown, and light brownish gray mottles and has white concretions of calcium carbonate

## **86—Hannon-Oktibbeha complex, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Hannon and similar soils: 60 percent

Oktibbeha and similar soils: 40 percent

### ***Component Descriptions***

#### **Hannon**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Clay loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Clayey marine deposits derived from chalk

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

Surface layer—0 to 5 inches; very dark grayish brown clay loam

Subsoil—5 to 10 inches; strong brown clay

Subsoil—10 to 25 inches; strong brown and light olive brown clay that has light yellowish brown and yellowish red mottles in the upper part and light grayish brown mottles in the lower part

Subsoil—25 to 80 inches; light olive brown clay loam that has yellowish brown mottles

#### **Oktibbeha**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Clay

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Clayey marine deposits over chalk

*Flooding:* None

*Depth to wet zone:* More than 6 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Surface layer—0 to 2 inches; brown clay

Subsoil—2 to 15 inches; yellowish red clay

Subsoil—15 to 39 inches; yellowish red and yellowish brown clay that has olive mottles in the upper part and gray mottles in the lower part

Subsoil—39 to 55 inches; dark yellowish brown clay that has light brownish gray mottles, white concretions of calcium carbonate, and soft white masses of calcium carbonate

Subsoil—55 to 80 inches; pale brown silty clay that has yellowish red, strong brown, and light brownish gray mottles and has white concretions of calcium carbonate

## 87—Clara and Plummer soils, occasionally ponded

### *Map Unit Composition*

#### **Major components**

Clara and similar soils: 50 percent

Plummer, hydric, and similar soils: 30 percent

#### **Contrasting inclusions**

Chipley soils: 10 percent

Albany soils: 5 percent

Plummer, nonhydric, soils: 5 percent

### *Component Descriptions*

#### **Clara**

*Geomorphic setting:* Semi-open depressions in marine terraces on coastal plains (fig. 6)

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)



Figure 6.—Slash pine in an area of Clara and Plummer soils, occasionally ponded. This area was recently burned to remove a dense understory. Because of wetness and sandiness, this map unit is only moderately suited as a site for haul roads and log landings.

*Drainage class:* Poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Wet zone:* At the surface year-around

*Ponding:* At the surface to 1/2 foot above the surface (January through April, July through September, December)

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.2 percent

*Typical profile:*

Surface layer—0 to 6 inches; very dark gray sand

Subsurface layer—6 to 20 inches; pale brown fine sand

Subsoil—20 to 60 inches; brownish yellow and very pale brown fine sand that has brown mottles in the lower part

Substratum—60 to 80 inches; gray fine sand

### **Plummer**

*Geomorphic setting:* Semi-open depressions in marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Poorly drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (January through November)

*Deepest depth to wet zone:* More than 6 feet (December)

*Ponding:* At the surface to 1/2 foot above the surface (January through April, July through September, December)

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark gray sand

Subsurface layer—3 to 47 inches; grayish brown and light brownish gray sand

Subsoil—47 to 59 inches; light gray sandy loam that has yellowish brown mottles

Subsoil—59 to 80 inches; light gray sandy clay loam

## **90—Rains and Bayboro soils, depressional**

### ***Map Unit Composition***

#### **Major components**

Rains and similar soils: 56 percent

Bayboro and similar soils: 40 percent

#### **Contrasting inclusions**

Lynchburg soils: 4 percent

### ***Component Descriptions***

#### **Rains**

*Geomorphic setting:* Depressions in marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Loamy marine deposits

*Flooding:* None

## Soil Survey of Washington County, Florida

*Shallowest depth to wet zone:* At the surface (January through March, June through September)

*Deepest depth to wet zone:* More than 6 feet (April, May, October through December)

*Months in which ponding does not occur:* April through June, October through December

*Deepest ponding:* 1 foot (January through March, July through September) (fig. 7)

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark grayish brown loamy sand

Subsoil—5 to 15 inches; light yellowish brown sandy loam that has reddish yellow mottles

Subsoil—15 to 55 inches; light brownish gray and light gray sandy clay loam that has strong brown, yellowish brown, and dark yellowish brown mottles

Subsoil—55 to 80 inches; light gray sandy clay loam that has yellowish brown and yellowish red mottles



**Figure 7.**—This road, which crosses an area of Rains and Bayboro soils, depressional, is in need of a culvert and additional fill material. Because of ponding, saturated soil conditions, and low strength, this map unit is very limited as a site for road development.

**Bayboro**

*Geomorphic setting:* Depressions in marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (January through March, June through September)

*Deepest depth to wet zone:* More than 6 feet (April, May, October through December)

*Months in which ponding does not occur:* April through June, October through December

*Deepest ponding:* 1 foot (January through March, July through September)

*Available water capacity to a depth of 60 inches:* High

*Content of organic matter in the upper 10 inches:* 7.0 percent

*Typical profile:*

Surface layer—0 to 14 inches; black loam

Subsoil—14 to 30 inches; very dark gray clay loam that has reddish yellow mottles

Subsoil—30 to 80 inches; dark grayish brown clay that has strong brown mottles

**91—Orangeburg loamy sand, 2 to 5 percent slopes**

***Map Unit Composition***

**Major components**

Orangeburg and similar soils: 87 percent

**Contrasting inclusions**

Dothan soils: 5 percent

Nankin soils: 3 percent

Norfolk soils: 3 percent

Goldsboro soils: 2 percent

***Component Description***

**Orangeburg**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Summits and shoulders

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark brown loamy sand

Subsoil—5 to 10 inches; strong brown sandy loam

Subsoil—10 to 75 inches; red sandy clay loam that has olive yellow mottles in the lower part

Subsoil—75 to 80 inches; red sandy clay

## 96—Orangeburg loamy sand, 5 to 8 percent slopes

### *Map Unit Composition*

#### **Major components**

Orangeburg and similar soils: 90 percent

#### **Contrasting inclusions**

Faceville soils: 10 percent

### *Component Description*

#### **Orangeburg**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Shoulders

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Loamy and clayey marine deposits

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet year-around

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 3 inches; dark brown loamy sand

Subsoil—3 to 80 inches; red sandy clay loam that has olive yellow mottles in the lower part

## 98—Rutlege loamy fine sand, depressional

### *Map Unit Composition*

#### **Major components**

Rutlege, depressional, and similar soils: 75 percent

#### **Contrasting inclusions**

Clara soils: 13 percent

Bibb soils: 5 percent

Pamlico soils: 4 percent

Leon soils: 2 percent

Plummer, hydric, soils: 1 percent

### *Component Description*

#### **Rutlege**

*Geomorphic setting:* Depressions in marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Sandy marine deposits

*Lowest frequency of flooding:* Occasional (April through June, October through December)

*Highest frequency of flooding:* Frequent (January through March, July through September)

*Wet zone:* At the surface year-around

*Deepest ponding:* 2 feet (January through September)

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 6.0 percent

*Typical profile:*

Surface layer—0 to 15 inches; black and very dark grayish brown loamy fine sand

Substratum—15 to 80 inches; light gray sand

## **99—Water**

### ***Map Unit Composition***

#### **Major components**

Water: 100 percent

## **100—Leon-Chipley complex**

### ***Map Unit Composition***

#### **Major components**

Leon and similar soils: 54 percent

Chipley and similar soils: 32 percent

#### **Contrasting inclusions**

Hurricane soils: 12 percent

Clara soils: 2 percent

### ***Component Descriptions***

#### **Leon**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains (fig. 8)

*Geomorphic component:* Side slopes

*Position on the landform:* Toeslopes

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1/2 foot (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

Surface layer—0 to 4 inches; dark grayish brown sand

Subsurface layer—4 to 10 inches; light gray sand that has very dark gray mottles

Subsoil—10 to 30 inches; dark brown sand

Subsoil—30 to 35 inches; light gray sand

Subsoil—35 to 51 inches; very dark brown and dark yellowish brown sand

Substratum—51 to 80 inches; light gray sand



**Figure 8.**—Wildlife habitat in an area of Leon-Chipley complex. This map unit has fair potential to support habitat for openland wildlife and good potential to support wild herbaceous plants. Trees to manage are slash pine and longleaf pine. The native plant community includes saw palmetto and perennial forbs and grasses. White-tailed deer use areas of this complex for concealment and browse.

### **Chipley**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Fine sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

Surface layer—0 to 12 inches; dark gray fine sand

Substratum—12 to 53 inches; light yellowish brown, light gray, and pale yellow sand that has strong brown and brownish yellow mottles

Substratum—53 to 80 inches; white sand that has reddish yellow mottles

## 106—Pantego and Clara soils, ponded

### *Map Unit Composition*

#### **Major components**

Pantego and similar soils: 55 percent

Clara and similar soils: 30 percent

#### **Contrasting inclusions**

Chipley soils: 10 percent

Leon soils: 3 percent

Bibb soils: 1 percent

Plummer, hydric, soils: 1 percent

### *Component Descriptions*

#### **Pantego**

*Geomorphic setting:* Depressions in marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Loamy marine deposits

*Flooding:* None

*Wet zone:* At the surface year-around (fig. 9)



Figure 9.—Swamp hardwoods in an area of Pantego and Clara soils, ponded. Water tupelo is the dominant tree species in areas of this map unit. The map unit is well suited to wetland plants and wetland wildlife.

*Ponding:* At the surface to 2 feet above the surface year-around

*Available water capacity to a depth of 60 inches:* High

*Content of organic matter in the upper 10 inches:* 5.0 percent

*Typical profile:*

Surface layer—0 to 18 inches; very dark gray sandy loam

Subsoil—18 to 80 inches; dark gray and gray sandy clay loam that has brownish yellow, yellowish brown, strong brown, and pale brown mottles

### **Clara**

*Geomorphic setting:* Depressions in marine terraces on coastal plains; flood plains on marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Very poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* None

*Wet zone:* At the surface year-around

*Ponding:* At the surface to 1/2 foot above the surface (January through April, July through September, December)

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 3 percent

*Typical profile:*

Surface layer—0 to 6 inches; very dark gray sand

Subsurface layer—6 to 20 inches; pale brown fine sand

Subsoil—20 to 60 inches; brownish yellow and very pale brown fine sand that has brown mottles in the lower part

Substratum—60 to 80 inches; gray fine sand

## **110—Arents, 0 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Arents and similar soils: 86 percent

#### **Contrasting inclusions**

Albany soils: 2 percent

Blanton soils: 2 percent

Dothan soils: 2 percent

Lucy soils: 2 percent

Norfolk soils: 2 percent

Orangeburg soils: 2 percent

Troup soils: 2 percent

### ***Component Description***

#### **Arents**

*Geomorphic setting:* Fills on marine terraces on coastal plains; rises on marine terraces on coastal plains

*Slope:* 0 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Altered marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1½ feet (January through April, December)

*Deepest depth to wet zone:* More than 6 feet (May through November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Very low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

AC—0 to 80 inches; sand

## **112—Pottsburg sand, occasionally flooded**

### ***Map Unit Composition***

#### **Major components**

Pottsburg and similar soils: 72 percent

#### **Contrasting inclusions**

Chipley soils: 13 percent

Leon soils: 8 percent

Osier soils: 4 percent

Plummer, hydric, soils: 3 percent

### ***Component Description***

#### **Pottsburg**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Toeslopes

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Poorly drained

*Parent material:* Sandy marine deposits

*Flooding:* Occasional (January through April, July through September, December)

*Shallowest depth to wet zone:* ½ foot (January through April, July through September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May, June, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 1.8 percent

*Typical profile:*

Surface layer—0 to 12 inches; dark gray and grayish brown sand

Subsurface layer—12 to 60 inches; light brownish gray and light gray sand

Subsoil—60 to 80 inches; brown and very dark gray sand

## **113—Pits-Udorthents complex, reclaimed, 0 to 90 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Pits: 80 percent

Udorthents and similar soils: 19 percent

#### **Contrasting inclusions**

Arents: 1 percent

### **Component Descriptions**

#### **Pits**

*Geomorphic setting:* Borrow pits on marine terraces on coastal plains; scalped areas on marine terraces on coastal plains

*Slope:* 0 to 90 percent

*Parent material:* Altered marine deposits

*Flooding:* None

*Ponding:* None

#### **Udorthents**

*Geomorphic setting:* Marine terraces on coastal plains

*Slope:* 0 to 30 percent

*Texture of the surface layer:* Sandy loam

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Altered marine deposits

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

AC—0 to 80 inches; sandy loam

This map unit consists of open excavations from which the original soil and underlying material have been removed for use at other locations (fig. 10). Most areas are barren of native vegetation. Some areas are used for buildings, equipment storage, or parking; other areas may contain water.

## **116—Blanton-Lakeland complex, 0 to 5 percent slopes**

### **Map Unit Composition**

#### **Major components**

Blanton and similar soils: 50 percent

Lakeland and similar soils: 40 percent

#### **Contrasting inclusions**

Foxworth soils: 10 percent

### **Component Descriptions**

#### **Blanton**

*Geomorphic setting:* Ridges and hills on marine terraces on coastal plains

*Geomorphic component:* Interfluves

*Position on the landform:* Shoulders and summits

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low



**Figure 10.—A borrow pit in an area of Pits-Udorthents complex, reclaimed, 0 to 90 percent slopes. This area was previously Lucy sand, 0 to 5 percent slopes. Lucy soils are excellent as homesites or as a source of material for roadbeds. This area is severely limited as a site for farming and urban development.**

*Content of organic matter in the upper 10 inches: 0.6 percent*

*Typical profile:*

Surface layer—0 to 6 inches; dark gray sand

Subsurface layer—6 to 56 inches; yellowish brown and brown sand

Subsoil—56 to 61 inches; yellowish brown sandy loam that has pale brown mottles

Subsoil—61 to 80 inches; pale brown sandy loam that has white and strong brown mottles

**Lakeland**

*Geomorphic setting:* Hills on marine terraces on coastal plains

*Geomorphic component:* Interfluves

*Position on the landform:* Summits and shoulders

*Slope:* 0 to 5 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

Surface layer—0 to 7 inches; brown sand

Substratum—7 to 80 inches; olive yellow, yellow, and brownish yellow sand

**117—Blanton-Lakeland complex, 5 to 8 percent slopes**

***Map Unit Composition***

**Major components**

Blanton and similar soils: 55 percent

Lakeland and similar soils: 38 percent

**Contrasting inclusions**

Foxworth soils: 7 percent

***Component Descriptions***

**Blanton**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark gray sand

Subsurface layer—5 to 50 inches; yellowish brown and brown sand

Subsoil—50 to 63 inches; yellowish brown loamy sand that has pale brown mottles

Subsoil—63 to 80 inches; pale brown sandy clay loam that has white and strong brown mottles

**Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes  
*Slope:* 5 to 8 percent  
*Texture of the surface layer:* Sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Excessively drained  
*Parent material:* Sandy eolian deposits, marine deposits, or both  
*Flooding:* None  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Low  
*Content of organic matter in the upper 10 inches:* 0.5 percent  
*Typical profile:*  
    Surface layer—0 to 6 inches; brown sand  
    Substratum—6 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **119—Blanton-Lakeland complex, 8 to 12 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Blanton and similar soils: 70 percent  
Lakeland and similar soils: 30 percent

### ***Component Descriptions***

#### **Blanton**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains  
*Geomorphic component:* Side slopes  
*Position on the landform:* Backslopes  
*Slope:* 8 to 12 percent  
*Texture of the surface layer:* Fine sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Moderately well drained  
*Parent material:* Sandy and loamy marine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)  
*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Low  
*Content of organic matter in the upper 10 inches:* 0.4 percent  
*Typical profile:*  
    Surface layer—0 to 4 inches; dark gray fine sand  
    Subsurface layer—4 to 46 inches; yellowish brown and brown fine sand  
    Subsoil—46 to 52 inches; yellowish brown sandy loam that has pale brown mottles  
    Subsoil—52 to 80 inches; pale brown sandy clay loam that has white and strong brown mottles

#### **Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains  
*Geomorphic component:* Side slopes  
*Position on the landform:* Backslopes  
*Slope:* 8 to 12 percent  
*Texture of the surface layer:* Sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 4 inches; brown sand

Substratum—4 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **121—Goldsboro loamy sand, 0 to 2 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Goldsboro and similar soils: 80 percent

#### **Contrasting inclusions**

Lynchburg soils: 12 percent

Dunbar soils: 5 percent

Bladen soils: 2 percent

Rains soils: 1 percent

### ***Component Description***

#### **Goldsboro**

*Geomorphic setting:* Flats on marine terraces on coastal plains

*Slope:* 0 to 2 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2 feet (January through April, August, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

Surface layer—0 to 9 inches; very dark grayish brown loamy sand

Subsurface layer—9 to 16 inches; light olive brown loamy sand

Subsoil—16 to 35 inches; olive yellow and light yellowish brown sandy clay loam that has yellowish red, strong brown, and light brownish gray mottles in the lower part

Subsoil—35 to 80 inches; grayish brown sandy clay loam that has red, strong brown, light yellowish brown, and light brownish gray mottles

## **122—Goldsboro loamy sand, 2 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Goldsboro and similar soils: 78 percent

#### **Contrasting inclusions**

Lynchburg soils: 13 percent

Dunbar soils: 9 percent

### ***Component Description***

#### **Goldsboro**

*Geomorphic setting:* Hillslopes and rises on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Footslopes

*Slope:* 2 to 5 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2 feet (January through April, August, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

Surface layer—0 to 7 inches; very dark grayish brown loamy sand

Subsurface layer—7 to 12 inches; light olive brown loamy sand

Subsoil—12 to 40 inches; olive yellow and light yellowish brown sandy clay loam that has yellowish red, strong brown, and light brownish gray mottles in the lower part

Subsoil—40 to 80 inches; grayish brown sandy clay loam that has red, strong brown, light yellowish brown, and light brownish gray mottles

## **123—Blanton-Lakeland complex, 12 to 45 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Blanton and similar soils: 60 percent

Lakeland and similar soils: 33 percent

#### **Contrasting inclusions**

Troup soils: 7 percent

### ***Component Descriptions***

#### **Blanton**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.4 percent

*Typical profile:*

- Surface layer—0 to 3 inches; dark gray sand
- Subsurface layer—3 to 43 inches; yellowish brown and brown sand
- Subsoil—43 to 52 inches; yellowish brown loamy sand that has pale brown mottles
- Subsoil—52 to 80 inches; pale brown sandy clay loam that has white and strong brown mottles

**Lakeland**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 12 to 45 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits, marine deposits, or both

*Flooding:* None

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.4 percent

*Typical profile:*

- Surface layer—0 to 3 inches; brown sand
- Substratum—3 to 80 inches; olive yellow, yellow, and brownish yellow sand

## **127—Goldsboro loamy sand, 5 to 8 percent slopes**

### ***Map Unit Composition***

**Major components**

Goldsboro and similar soils: 74 percent

**Contrasting inclusions**

Ocilla soils: 12 percent

Dothan soils: 8 percent

Lynchburg soils: 6 percent

### ***Component Description***

**Goldsboro**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Loamy sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2 feet (January through April, August, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October, November)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Moderate

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

- Surface layer—0 to 5 inches; very dark grayish brown loamy sand

Subsurface layer—5 to 7 inches; light olive brown loamy sand  
Subsoil—7 to 49 inches; olive yellow and light yellowish brown sandy clay loam that has yellowish red, strong brown, and light brownish gray mottles in the lower part  
Subsoil—49 to 80 inches; grayish brown sandy clay loam that has red, strong brown, light yellowish brown, and light brownish gray mottles

## **128—Blanton-Bonneau complex, 0 to 5 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Blanton and similar soils: 70 percent  
Bonneau and similar soils: 30 percent

### ***Component Descriptions***

#### **Blanton**

*Geomorphic setting:* Hills on marine terraces on coastal plains  
*Geomorphic component:* Interfluves and side slopes  
*Position on the landform:* Shoulders and summits  
*Slope:* 0 to 5 percent  
*Texture of the surface layer:* Fine sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Moderately well drained  
*Parent material:* Sandy and loamy marine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)  
*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Low  
*Content of organic matter in the upper 10 inches:* 0.5 percent  
*Typical profile:*  
Surface layer—0 to 6 inches; dark gray fine sand  
Subsurface layer—6 to 46 inches; yellowish brown and brown sand  
Subsoil—46 to 54 inches; yellowish brown sandy loam that has pale brown mottles  
Subsoil—54 to 80 inches; pale brown sandy loam that has white and strong brown mottles

#### **Bonneau**

*Geomorphic setting:* Hills on marine terraces on coastal plains  
*Geomorphic component:* Interfluves  
*Position on the landform:* Summits and shoulders  
*Slope:* 0 to 5 percent  
*Texture of the surface layer:* Sand  
*Depth to restrictive feature:* Very deep (more than 60 inches)  
*Drainage class:* Well drained  
*Parent material:* Sandy and loamy marine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* 3½ feet (January through April, August, September, December)  
*Deepest depth to wet zone:* More than 6.7 feet (May through July, October, November)  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Surface layer—0 to 6 inches; dark brown sand

Subsurface layer—6 to 25 inches; yellowish brown sand

Subsoil—25 to 48 inches; yellowish brown and very pale brown sandy loam

Subsoil—48 to 80 inches; light brownish gray sandy clay loam that has strong brown mottles

## **129—Blanton-Bonneau complex, 5 to 8 percent slopes**

### ***Map Unit Composition***

#### **Major components**

Blanton and similar soils: 65 percent

Bonneau and similar soils: 35 percent

### ***Component Descriptions***

#### **Blanton**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Moderately well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through March, July through September)

*Deepest depth to wet zone:* More than 6.7 feet (April through June, October through December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* Low

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

Surface layer—0 to 5 inches; dark gray sand

Subsurface layer—5 to 50 inches; yellowish brown and brown sand

Subsoil—50 to 52 inches; yellowish brown loamy sand that has pale brown mottles

Subsoil—52 to 80 inches; pale brown sandy loam that has white and strong brown mottles

#### **Bonneau**

*Geomorphic setting:* Hillslopes on marine terraces on coastal plains

*Geomorphic component:* Side slopes

*Position on the landform:* Backslopes

*Slope:* 5 to 8 percent

*Texture of the surface layer:* Sand

*Depth to restrictive feature:* Very deep (more than 60 inches)

*Drainage class:* Well drained

*Parent material:* Sandy and loamy marine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3½ feet (January through April, August, September, December)

*Deepest depth to wet zone:* More than 6.7 feet (May through July, October, November)

*Ponding:* None

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*Available water capacity to a depth of 60 inches: Moderate*

*Content of organic matter in the upper 10 inches: 0.6 percent*

*Typical profile:*

Surface layer—0 to 3 inches; dark brown sand

Subsurface layer—3 to 15 inches; yellowish brown sand

Subsoil—15 to 54 inches; yellowish brown and very pale brown sandy loam

Subsoil—54 to 80 inches; light brownish gray sandy clay loam that has strong brown mottles



# Use and Management of the Soils

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

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

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

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

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

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

## Interpretive Ratings

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

## Rating Class Terms

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

## Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact

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

## Crops and Pasture

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

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

Federal and State regulations require that any area designated as wetlands cannot be altered without prior approval as described in the National Food Security Act Manual (USDA–NRCS, 2008). Contact the local office of the Natural Resources Conservation Service for identification of hydric soils and potential wetlands.

The acreage used for crops and pasture in Washington County has been increasing since the early 1980s. In 2002, the county had 391 farms and 53,251 acres of farmland. In 2007, the county had 462 farms and 73,836 acres of farmland (USDA–NASS, 2007). In 2007, the market value of farmland production was \$5,761,000. Of the acreage used for farms, 46 percent was woodlands, 31 percent was cropland, 13 percent was permanent pasture, and 10 percent was used for livestock, nurseries, or other uses. The main agricultural crops were soybean, peanuts, corn, grains, watermelons, and vegetables. These crops accounted for about 19,082 acres of cropland and 18,377 acres of pastureland. The average size of a farm was 160 acres.

The potential of the soils in Washington County to support increased food production is good. In addition to the reserve capacity represented by soils now used as forestland and pasture, extending the latest crop production technology to all of the cropland in the county could increase food production. This soil survey can help in the application of such technology.

Erosion caused by water is a hazard on cropland where the slope is more than 5 percent, especially in areas of the well drained and moderately well drained Blanton, Dothan, Fuquay, Lucy, and Troup soils. Erosion can reduce productivity and can result in pollution of streams. Productivity is reduced as the surface layer erodes and more of the subsoil is incorporated into the plow layer. Erosion on farmland results in sediment entering streams. Controlling this erosion minimizes the pollution of streams and improves the quality of water for municipal uses, for recreational uses, and for fish and wildlife.

Erosion-control practices provide a protective surface cover, increase the rate of water infiltration, and help to control runoff. A cropping system that keeps plant cover on the soil for extended periods can hold soil losses to amounts that do not reduce the productive capacity of the soils.

Minimizing tillage and leaving crop residue on the surface increase the rate of water infiltration and help to control runoff and erosion. Using a no-till system helps to control erosion in sloping areas. These practices can be adapted to most of the soils in the survey area. Terraces, diversions, and stripcropping help to control runoff and erosion by reducing the length of slope. These practices are most practical on deep, well drained soils that have a regular slope. Diversions and sod waterways, which also help to control runoff and erosion, can be used on most of the soils in the county. Contour farming also helps to control erosion. It is most suited to soils that have smooth, uniform slopes.

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Erosion caused by wind is currently not a significant problem in Washington County. The cropland in the county is intermixed with areas of forestland. This mixture precludes the large distances of unsheltered cropland that are associated with wind erosion. Wind erosion can be a hazard where the soils are exposed and have a sandy surface layer or a surface layer of loamy sand. Strong winds can damage soils and tender crops in a few hours in open, unprotected areas where the surface is dry and bare. Maintaining a plant cover and surface mulch minimize wind erosion.

Information regarding the design of erosion-control practices for each kind of soil is contained in "Water and Wind Erosion Control Handbook—Florida," which is available at the local office of the Natural Resources Conservation Service.

Drainage is not a major management concern on the acreage currently used for crops and pasture in Washington County. Soils that are poorly drained or very poorly drained are not normally used for crops and pasture.

Fertility is naturally low in most of the soils in the county. Most of the soils have a surface layer of sand or loamy sand. Many of the soils have a loamy subsoil. Examples are Albany, Blanton, Bonifay, Dothan, Fuquay, Leefield, Lucy, and Troup soils. Chipley and Lakeland soils have sandy material to a depth of 80 inches or more. Hurricane soils have an organic-stained subsoil.

Most of the soils in the county have a surface layer that is strongly acid or very strongly acid and require applications of lime to raise the pH sufficiently for good growth of crops. Nitrogen, potassium, and phosphate levels are naturally low in most of these soils.

On all soils, applications of lime and fertilizer should be based on the results of soil tests, on the needs of crops, and on the expected level of yields. The Cooperative Extension Service can help in determining the kinds and amounts of fertilizer and lime to apply.

Tilth is an important factor affecting the germination of seeds and the infiltration of water into the soil. Soils that have good tilth are granular and porous.

Most of the soils that are used for crops and pasture in the county have a low or moderate content of organic matter. Generally, the structure of the surface layer of these soils is weak. Soils that have a low content of organic matter form a slight crust following intense rainfall. The crust is slightly hard when dry and is impervious to water. It reduces infiltration and increases runoff. The increased runoff causes erosion. Regular additions of crop residue, manure, and other organic material improve structure and minimize crusting.

Pastures in the county are mostly used to produce forage for beef cattle. Beef cattle cow-calf operations are the major cattle systems. Bahiagrass and coastal bermudagrass are the major pasture plants. In many of the pastures, excess grass is harvested as hay during the summer for use as feed during the winter. The well drained and moderately well drained Blanton, Cowarts, Dothan, Fuquay, Goldsboro, Lucy, and Orangeburg soils are well suited to bahiagrass, alfalfa, and improved bahiagrass. The somewhat poorly drained Albany, Chipley, Hurricane, and Leefield soils are well suited to bahiagrass and improved bermudagrass if legumes, such as white, crimson, and arrowleaf clover, are also grown and if adequate amounts of lime and fertilizer are applied.

Many of the pastures in the county are greatly depleted because of continuous, excessive grazing. Pasture yields can be increased by properly applying lime and fertilizer, growing legumes, installing drainage, irrigating, and using other management practices.

Differences in pasture yields are closely related to differences in soils. Proper management of pasture is based on the interrelationship of soils, pasture plants, lime, fertilizer, and moisture.

## Yields per Acre

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

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

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

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

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

## Land Capability Classification

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

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

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

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

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

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

The capability classification of the soils in this survey area is given in table 5.

## Ecological Communities

In areas that have similar climate and topography, differences between the kinds and amounts of vegetation in the areas are closely related to differences between the kinds of soils in the areas. An *ecological community* is the product of all the environmental factors responsible for its development. It has characteristic soils; a characteristic hydrology, particularly infiltration and runoff; and a characteristic plant community. The vegetation, soils, and hydrology are all interrelated. Descriptions of ecological communities are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service, and in the electronic Field Office Technical Guide, which is available online.

The relationship between soils and vegetation was ascertained during this survey; thus, ecological communities generally can be determined directly from the soil map. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of plants. Soil reaction and a seasonal high water table are also important.

The ecological community concept is based on the knowledge that a soil type commonly supports a specific vegetative community, which in turn provides the habitat needed by specific wildlife species. Vegetative communities form recognizable units on the landscape, most of which are apparent to the casual observer after only a little training. Even without prior botanical training, an observer can quickly learn to distinguish between North Florida Flatwoods and Longleaf Pine-Turkey Oak Hills or between Slough and Swamp Hardwoods. Once a community is recognized,

information can be found concerning the general characteristics of the soil on which it occurs and the types of plants and animals it supports.

Although some plants are found only within a very narrow range of conditions, many plants can survive throughout a wide range of conditions. Individual plants that have a wide tolerance level can occur in many different communities and on a variety of soils. When describing ecological communities, plant scientists study the patterns in which vegetation occurs. They study what species occur, the relative abundance of each species, the stage of plant succession, the dominance of species, the position of species on the landscape, and the soil or soils on which the patterns occur. Recognizable patterns of vegetation are typically found in a small group of soil types that have common characteristics.

During many years of field observations while conducting soil surveys, the Natural Resources Conservation Service determined which vegetative communities commonly occur on the different soils throughout Florida. This information is summarized in the booklet "26 Ecological Communities of Florida" (USDA–SCS, 1989). Some of the terms used to describe these communities are specific to Florida.

In the following paragraphs, the vegetative community on individual map units during the climax state of plant succession is described. The community described is based on relatively natural conditions. Human activities, such as logging and fire suppression, can alter the community on a specific site.

#### **Longleaf Pine-Turkey Oak Hills**

The Longleaf Pine-Turkey Oak Hills ecological community is typically on nearly level or gently sloping uplands. There are several variations of this community. Mature, natural stands of trees that have not been logged have an overstory of scattered longleaf pine. Areas from which the pines have been removed are dominated by turkey oak and other oaks, have little ground cover, and have numerous, noticeable bare areas. This ecological community supports wildlife species that are adapted to stress caused by high temperatures and drought. Many of the animals are burrowers. Burrowing helps to prevent water loss and provides protection against high temperatures. The most common animals are fox squirrel, pocket gopher, turkey, white-tailed deer, bobwhite quail, ground dove, gopher tortoise, and many types of songbirds, including warblers, towhees, and crested flycatchers. This ecological community is used to some extent for timber production. Sand pine is commonly planted because it is better adapted to these sites than slash pine. Recent advancements in nursery stock of longleaf pine have reduced the amount of time seedlings remain in the "grass stage." The map units that support the Longleaf Pine-Turkey Oak Hills ecological community in Washington County are:

- 36 Troup-Lucy complex, 5 to 8 percent slopes
- 61 Lakeland sand, 8 to 12 percent slopes
- 62 Lakeland sand, 12 to 45 percent slopes
- 63 Lakeland sand, 0 to 5 percent slopes
- 64 Lakeland sand, 5 to 8 percent slopes
- 116 Blanton-Lakeland complex, 0 to 5 percent slopes
- 117 Blanton-Lakeland complex, 5 to 8 percent slopes
- 119 Blanton-Lakeland complex, 8 to 12 percent slopes

#### **Mixed Hardwood and Pine**

The Mixed Hardwood and Pine ecological community is typically on rolling uplands. Water movement is gradual and flows to natural drainageways. This ecological community can be easily identified by the mixed hardwood and pine vegetation in predominantly better drained areas. The type and amount of vegetation vary depending on the stage of succession. In the early stages, shortleaf pine and loblolly pine dominate. As the system matures, hardwoods replace the pines. This ecological community supports deer, turkey, squirrel, raccoon, opossum, bobwhite quail, dove,

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and many types of songbirds. Hardwood mast (acorns, nuts, fruits, buds, and berries) furnish a good source of food for wildlife. The map units that support the Mixed Hardwood and Pine ecological community in Washington County are:

- 4 Gritney loamy sand, 2 to 5 percent slopes
- 9 Albany-Chipley-Leon complex, 0 to 5 percent slopes
- 11 Dothan loamy sand, 0 to 2 percent slopes
- 12 Dothan loamy sand, 2 to 5 percent slopes
- 14 Dothan loamy sand, 5 to 8 percent slopes
- 18 Fuquay-Dothan complex, 5 to 8 percent slopes
- 22 Nankin-Cowarts complex, 2 to 5 percent slopes, eroded
- 23 Nankin-Cowarts complex, 5 to 8 percent slopes, eroded
- 29 Dunbar loamy sand, 2 to 5 percent slopes, occasionally flooded
- 35 Lucy-Troup complex, 0 to 5 percent slopes
- 39 Bonifay-Fuquay complex, 0 to 5 percent slopes
- 40 Bonifay loamy sand, 5 to 8 percent slopes
- 41 Lucy sand, 0 to 5 percent slopes
- 54 Albany-Ocilla complex, 0 to 5 percent slopes, occasionally flooded
- 55 Chipley-Albany-Hurricane complex, 0 to 5 percent slopes
- 56 Albany-Ocilla complex, 5 to 8 percent slopes
- 57 Ocilla-Leafield complex, 0 to 5 percent slopes
- 67 Nankin-Cowarts-Lakeland complex, 5 to 12 percent slopes
- 68 Nankin-Cowarts-Lakeland complex, 12 to 45 percent slopes, eroded
- 71 Lynchburg loamy fine sand, 0 to 2 percent slopes
- 72 Lynchburg loamy fine sand, 2 to 5 percent slopes
- 85 Searcy-Oktibbeha complex, 2 to 5 percent slopes
- 86 Hannon-Oktibbeha complex, 5 to 8 percent slopes
- 91 Orangeburg loamy sand, 2 to 5 percent slopes
- 96 Orangeburg loamy sand, 5 to 8 percent slopes
- 121 Goldsboro loamy sand, 0 to 2 percent slopes
- 122 Goldsboro loamy sand, 2 to 5 percent slopes
- 123 Blanton-Lakeland complex, 12 to 45 percent slopes
- 127 Goldsboro loamy sand, 5 to 8 percent slopes
- 128 Blanton-Bonneau complex, 0 to 5 percent slopes
- 129 Blanton-Bonneau complex, 5 to 8 percent slopes

### **North Florida Flatwoods**

The North Florida Flatwoods ecological community is in nearly level areas. Water movement is very gradual and flows to natural drainageways, swamps, ponds, and marshes. Wet conditions prevail during the rainy season when the water table is on or near the surface. This ecological community is easily identified by the flat topography, slash pine, and dense saw palmetto vegetation. This ecological community supports a diverse and numerous population of wildlife, including deer, quail, turkey, squirrels, bobcat, skunks, opossums, raccoons, and many types of songbirds, particularly warblers. The map units that support the North Florida Flatwoods ecological community in Washington County are:

- 87 Clara and Plummer soils, occasionally ponded
- 100 Leon-Chipley complex
- 112 Pottsburg sand, occasionally flooded

### **Swamp Hardwoods**

The Swamp Hardwoods ecological community borders rivers and is in basins that are either submerged or saturated part of the year. This ecological community is typically characterized by hardwoods, a high percentage of which are deciduous. Common dominant trees are red maple, elm, blackgum, water tupelo, and cypress.

This ecological community supports wildlife that are adapted to wet conditions and can endure periodic flooding. These include black bear, bobcat, deer, turkey, gray squirrel, mink, otter, raccoon, hawks, owls, pileated woodpecker, wood duck, songbirds, turtles, snakes, and alligators. The map units that support the Swamp Hardwoods ecological community in Washington County are:

- 2 Rutlege, Pickney, and Pamlico soils, frequently flooded
- 7 Bladen-Dunbar complex, occasionally flooded
- 52 Grady loam, ponded
- 90 Rains and Bayboro soils, depressional
- 98 Rutlege loamy fine sand, depressional
- 106 Pantego and Clara soils, ponded

## Prime Farmland

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.

For some soils identified as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

The following map units in Washington County meet the requirements for prime farmland. This list does not constitute a recommendation for a particular land use.

- 4 Gritney loamy sand, 2 to 5 percent slopes
- 11 Dothan loamy sand, 0 to 2 percent slopes
- 12 Dothan loamy sand, 2 to 5 percent slopes
- 14 Dothan loamy sand, 5 to 8 percent slopes

- 29 Dunbar loamy sand, 2 to 5 percent slopes, occasionally flooded (where drained and either protected from flooding or not frequently flooded during the growing season)
- 71 Lynchburg loamy fine sand, 0 to 2 percent slopes (where drained)
- 72 Lynchburg loamy fine sand, 2 to 5 percent slopes (where drained)
- 91 Orangeburg loamy sand, 2 to 5 percent slopes
- 96 Orangeburg loamy sand, 5 to 8 percent slopes
- 121 Goldsboro loamy sand, 0 to 2 percent slopes
- 122 Goldsboro loamy sand, 2 to 5 percent slopes
- 127 Goldsboro loamy sand, 5 to 8 percent slopes

## Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 6a, 6b, and 6c show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage).

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

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

**Table 6a**

*Application of manure and food-processing waste* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

*Application of sewage sludge* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge.

**Table 6b**

*Disposal of wastewater by irrigation* not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock, depth to a water table, and ponding. The properties that affect performance include depth to bedrock, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals

*Overland flow of wastewater* is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock, stones, and cobbles affect design and construction.

**Table 6c**

*Rapid infiltration of wastewater* is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance

*Slow rate treatment of wastewater* is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

## **Forestland Productivity and Management**

Forestland comprises about 293,169 acres, or about 79 percent, of Washington County. Of this total, 249,194 acres is privately owned; 26,385 acres is owned by large, wood using industries; and 17,590 acres is publicly owned (Jacobson and Vericker, 1996). Slash pine, either native or planted, is the main tree species grown in the county. It is especially common in areas of flats and knolls, which are the dominant landforms in the county. Soils that typically support slash pine are Chipley, Hurricane, Leon, and Plummer soils.

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Sand pine, longleaf pine, and loblolly pine are the other tree species grown in the county. Sand pine requires relatively sandy, dry sites for optimum survival and growth. The major soils that support sand pine are Lakeland and Troup soils.

Loblolly pine grows in areas of soils that have a loamy subsoil that is relatively close to the surface and that are somewhat poorly drained to well drained. The major soils that support loblolly pine are Cowarts, Dothan, Fuquay, Goldsboro, Leefield, Lucy, Nankin, and Orangeburg soils. Most areas of loblolly pine in the county are on uplands adjacent to the Choctawhatchee River (fig. 11).

The river bottoms and flood plains along the Choctawhatchee River support bottomland hardwoods and slash pine. The hardwood species include cypress, hickory, sweetgum, sycamore, tupelo, and various oaks. The common soils in these areas are Clara, Pamlico, Pantego, Pickney, and Rutlege soils.

Timber management in Washington County includes clearcutting, bedding, planting, and selective cutting and thinning. Prescribed burning on pine plantations can reduce plant competition and exposes mineral soils as a bed for young pine seedlings. Burning also encourages the growth of grasses and forbs that help to support various wildlife species, such as deer, quail, and turkey.

The tables associated with 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.

More detailed information on forestland and forestland management can be obtained from local consulting foresters, the Florida Division of Forestry, and the Natural Resources Conservation Service.



**Figure 11.—Slash pine and loblolly pine being harvested in an area of Lucy-Troup complex, 0 to 5 percent slopes. Forestland covers almost 80 percent of the county, and timber production is a major source of income and employment.**

## 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 and online.

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 through 8e, 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).

In table 8e, the rating class terms for fire damage and seedling mortality are expressed as *low*, *moderate*, and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

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

### Table 8a

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations

can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

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

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

**Table 8b**

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

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

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

**Table 8d**

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the

surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

#### **Table 8e**

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

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

## **Recreational Development**

In 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 (fig. 12).

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.



**Figure 12.—Flooding in an area of Rutlege, Pickney, and Pamlico soils, frequently flooded. This map unit is very limited as a site for recreational development and building site development due to frequent flooding in the winter and early spring. Tropical storms in the summer and fall also cause flooding in areas of this map unit.**

### **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 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, 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, permeability, and toxic substances in the soil.

*Playgrounds* require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock, permeability, and toxic substances in the soil.

**Table 9b**

*Paths and trails* for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

*Off-road motorcycle trails* require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## **Wildlife Habitat**

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

In table 10, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

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

be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

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

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

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

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

*Hardwood trees* and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, magnolia, sweetgum, dogwood, and hickory.

*Coniferous plants* furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are slash pine, longleaf pine, redcedar, and bald cypress.

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

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

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

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

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

*Habitat for wetland wildlife* consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, egrets, herons, shore birds, alligator, and otter.

## Hydric Soils

In this section, hydric soils are defined and described. The map units that meet the definition of hydric soils and the map units that include hydric soils are listed.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin et al., 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 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 Vasilas, 2006).

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

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995).

- 2 Rutlege, Pickney, and Pamlico soils, frequently flooded
- 52 Grady loam, ponded

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

The following map units contain components that meet the criteria for hydric soils. Only a portion of each unit, however, is hydric. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

- 7 Bladen-Dunbar complex, occasionally flooded
- 9 Albany-ChIPLEY-Leon complex, 0 to 5 percent slopes
- 29 Dunbar loamy sand, 2 to 5 percent slopes, occasionally flooded
- 87 Clara and Plummer soils, occasionally ponded
- 90 Rains and Bayboro soils, depressional
- 98 Rutlege loamy fine sand, depressional
- 100 Leon-ChIPLEY complex
- 106 Pantego and Clara soils, ponded
- 112 Pottsburg sand, occasionally flooded
- 121 Goldsboro loamy sand, 0 to 2 percent slopes

## 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 11a and 11b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

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

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

### Table 11a

*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, hardness of bedrock, and the amount and size of rock fragments.

*Small commercial buildings* are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock, hardness of bedrock, and the amount and size of rock fragments.

### Table 11b

*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, hardness of bedrock, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), depth to a water table, and ponding.

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

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

## Sanitary Facilities

Tables 12a and 12b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

### Table 12a

*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, 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, 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 and bedrock 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.

**Table 12b**

*A trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil

properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

## Construction Materials

Tables 13a and 13b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

### Table 13a

*Gravel* and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table, 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 gravel or 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 gravel or sand, the soil is considered a likely source regardless of thickness. The assumption is that the gravel or sand layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of gravel and 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 gravel or 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.

### Table 13b

In table 13b, the rating class terms are *good*, *fair*, and *poor*. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features

limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

*Reclamation material* is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

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

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

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

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock, 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 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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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.

*Aquifer-fed excavated ponds* are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

# Soil Properties

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

## Engineering Soil Properties

Table 15 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 oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

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

## Physical Soil Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

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

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, 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 (oven-dry) 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 (33- or 10-kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Saturated hydraulic conductivity (K<sub>sat</sub>)* refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of in micrometers per second. They are based on soil characteristics observed in the field,

particularly structure, porosity, and texture. Saturated hydraulic conductivity ( $K_{sat}$ ) 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 (33- or 10-kPa) moisture tension and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is *low* if the soil has a linear extensibility of less than 3 percent; *moderate* if 3 to 6 percent; *high* if 6 to 9 percent; and *very high* if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

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

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

*Erosion factors* are shown in the table as the K factor ( $K_w$  and  $K_f$ ) 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  $K_w$*  indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

*Erosion factor  $K_f$*  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook," which is available in local offices of the Natural Resources Conservation Service or online.

*Wind erodibility index* is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture also influences wind erosion.

## Chemical Soil Properties

Table 17 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

*Cation-exchange capacity* is the total amount of extractable 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. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

*Effective cation-exchange capacity* refers to the sum of extractable cations plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

*Soil reaction* is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Calcium carbonate* equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

## Soil Features

Table 18 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 and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

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

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

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

## Water Features

Table 19 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*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

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

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

*Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual

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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.

# Classification of the Soils

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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 20 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 Paleudults (*Pale*, meaning thick horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

**SUBGROUP.** Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Grossarenic* identifies the subgroup that has an argillic horizon at a depth of 100 centimeters or more below the surface. An example is Grossarenic Paleudults.

**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 loamy, siliceous, semiactive, thermic Grossarenic Paleudults.

**SERIES.** The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example is the Blanton series.

Table 20, "Taxonomic Classification of the Soils," indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

## Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger et al., 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.

In some instances, the typical pedon for a series is located outside the survey area. The selection of a typical pedon is based on the range of characteristics of the series as it occurs throughout a particular major land resource area. The Pantego and Pottsburg series, for example, are common in MLRA 133A (Southern Coastal Plain), which extends from Virginia to Louisiana. The typical pedons for the Pantego and Pottsburg series are in Bay County, Florida. The soil properties of both pedons are representative of the Pantego and Pottsburg soils as they occur not only in Bay County but also in Washington County and other counties in MLRA 133A.

### Albany Series

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderate or moderately slow

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Knolls and rises

*Slope:* 0 to 5 percent

*Taxonomic classification:* Loamy, siliceous, subactive, thermic Aquic Arenic Paleudults

The Albany soils are commonly associated on the landscape with Blanton, Chipley, Dothan, Fuquay, Goldsboro, Leon, and Stilson soils. The poorly drained Leon soils are in the lower positions. The other associated soils are in the higher positions. The Blanton, Goldsboro, and Stilson soils are moderately well drained. The Chipley soils are sandy throughout. The Dothan and Fuquay soils are well drained.

#### Typical Pedon

Albany loamy sand, in an area of Albany-Chipley-Leon complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Millers Ferry SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 31 minutes 25.11 seconds N. and long. 85 degrees 50 minutes 25.24 seconds W.

Ap—0 to 3 inches; dark grayish brown (2.5Y 4/2) loamy sand; weak fine granular structure; very friable; very strongly acid; clear smooth boundary.

E1—3 to 19 inches; light olive brown (2.5Y 5/3) sand; single grain; very friable; strongly acid; gradual smooth boundary.

E2—19 to 50 inches; light yellowish brown (2.5Y 6/4) sand; single grain; loose; many fine prominent reddish yellow (5YR 6/8) masses of iron accumulation and many medium distinct light gray (10YR 7/2) iron depletions; very strongly acid; clear wavy boundary.

Eg—50 to 55 inches; light gray (2.5Y 7/1) sand; single grain; loose; common fine prominent reddish yellow (7.5YR 6/8), common medium distinct light yellowish brown (10YR 6/4), and few medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg1—55 to 65 inches; light gray (2.5Y 7/2) fine sandy loam; weak medium subangular blocky structure; friable; common fine distinct pale yellow (2.5Y 7/4) and common fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg2—65 to 80 inches; light gray (10YR 7/2) fine sandy loam; weak medium subangular blocky structure; friable; common fine prominent brownish yellow (10YR 6/6), common fine prominent reddish yellow (7.5YR 6/8), and common fine and medium prominent red (10R 4/8) masses of iron accumulation; strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* 40 to 80 inches

*Reaction:* Extremely acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 or 2

Texture—loamy sand or sand

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 7

Texture—sand, fine sand, loamy sand, or loamy fine sand

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

*Eg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2

Texture—sand, fine sand, loamy sand, or loamy fine sand

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

*Btg horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2

Texture—fine sandy loam, sandy loam, or sandy clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

## **Bayboro Series**

*Drainage class:* Very poorly drained

*Permeability:* Slow

*Parent material:* Clayey marine sediments

*Landscape:* Lower and middle Coastal Plain

*Landform:* Flats and depressions

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine, mixed, semiactive, thermic Umbric Paleaquults

The Bayboro soils are commonly associated on the landscape with Bladen, Grady, Lynchburg, Ocilla, Pantego, Plummer, Rains, and Surrency soils. The Bladen and Plummer soils are poorly drained. Also, the Bladen soils have more than 35 percent clay in the Bt horizon. The Grady soils have a clayey particle-size control section. The Lynchburg soils are in the higher positions and are somewhat poorly drained. The Ocilla soils are in the slightly higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are somewhat poorly drained. The Pantego and Surrency soils are in landscape positions similar to those of the Bayboro soils but are very poorly drained. The Rains soils are better drained than the Bayboro soils and do not have a dark-colored umbric epipedon.

### **Typical Pedon**

Bayboro loam, in an area of Rains and Bayboro soils, depressional; in Washington County, Florida; USGS Chipley NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 49 minutes 27.65 seconds N. and long. 85 degrees 32 minutes 1.01 seconds W.

A—0 to 14 inches; black (10YR 2/1) loam; weak medium granular structure; friable; very strongly acid; clear wavy boundary.

B<sub>Ag</sub>—14 to 30 inches; very dark gray (10YR 3/1) clay loam; weak fine subangular blocky structure; friable; few fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

B<sub>tg</sub>—30 to 80 inches; dark grayish brown (10YR 4/2) clay; weak medium subangular blocky structure; very firm; common medium distinct strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid.

### **Range in Characteristics**

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or A<sub>p</sub> 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 2 or 3

Texture—loam, sandy loam, clay loam, or the mucky analogs of these textures

*B<sub>Ag</sub> horizon (where present):*

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

Texture—clay loam, loam, or sandy clay loam

Redoximorphic features—few to many iron accumulations in shades of brown and yellow

*B<sub>tg</sub> horizon:*

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

Texture—clay or clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

*B<sub>Cg</sub> horizon (where present):*

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

Texture—clay, sandy clay, clay loam, or sandy clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, red, and yellow

*C<sub>g</sub> horizon (where present):*

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

Texture—stratified clayey sediment

Redoximorphic features—few to many iron accumulations in shades of brown, red, and yellow

## **Bladen Series**

*Drainage class:* Poorly drained

*Permeability:* Slow

*Parent material:* Clayey marine sediments

*Landscape:* Lower and middle Coastal Plain

*Landform:* Flats and low stream terraces

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine, mixed, semiactive, thermic Typic Albaquults

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The Bladen soils are commonly associated on the landscape with Dunbar, Leefield, Lynchburg, and Rains soils. The Dunbar, Leefield, and Lynchburg soils are in the higher positions and are somewhat poorly drained. Also, the Leefield soils have an argillic horizon and plinthic features below a depth of 20 inches. The Rains soils are in positions similar to those of the Bladen soils but have 18 to 35 percent clay in the control section.

### ***Typical Pedon***

Bladen sandy loam, in an area of Bladen-Dunbar complex, occasionally flooded; in Washington County, Florida; USGS Hinsons Crossroads NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 42 minutes 49.42 seconds N. and long. 85 degrees 49 minutes 44.55 seconds W.

A—0 to 5 inches; very dark grayish brown (2.5Y 3/2) sandy loam; weak fine granular structure; very friable; many fine roots; very strongly acid; clear smooth boundary.

Btg1—5 to 30 inches; light brownish gray (2.5Y 6/2) clay; moderate medium subangular blocky structure; very firm; few fine roots; common medium prominent yellowish brown (10YR 5/8) and yellow (10YR 7/8) soft masses of iron accumulation; extremely acid; gradual wavy boundary.

Btg2—30 to 54 inches; light brownish gray (2.5Y 6/2) clay; strong medium subangular blocky structure; very firm; common medium prominent yellowish red (5YR 4/6) soft masses of iron accumulation; extremely acid; gradual smooth boundary.

Btg3—54 to 80 inches; light brownish gray (2.5Y 6/2) clay; moderate medium subangular blocky structure; very firm; many coarse prominent red (2.5YR 4/6) soft masses of iron accumulation; extremely acid.

### ***Range in Characteristics***

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2

Texture—sandy loam or loam

*BE horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy clay loam or sandy loam

Redoximorphic features (where present)—few iron accumulations in shades of brown or yellow or iron depletions in shades of gray

*Btg horizon:*

Color—hue of 10YR or 2.5Y, 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

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

*BCg horizon (where present):*

Color—hue of 10YR or 2.5Y, 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

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

*Cg horizon (where present):*

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

Texture—stratified clayey sediment

Redoximorphic features—few to many iron accumulations in shades of brown, red, and yellow

## **Blanton Series**

*Drainage class:* Moderately well drained

*Permeability:* Moderate or moderately slow

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Hills, knolls, and hillslopes

*Slope:* 0 to 12 percent

*Taxonomic classification:* Loamy, siliceous, semiactive, thermic Grossarenic Paleudults

The Blanton soils are commonly associated on the landscape with Albany, Bonifay, Bonneau, Cowarts, Dothan, Fuquay, Goldsboro, and Lakeland soils. The Albany soils are in the lower positions and are somewhat poorly drained. The Bonifay soils have a significant accumulation of plinthite in the subsoil. The Bonneau soils are in positions similar to those of the Blanton soils but are well drained and have a sandy epipedon that is 20 to 40 inches thick. The Cowarts, Dothan, Fuquay, and Goldsboro soils are in positions similar to those of the Blanton soils. The Cowarts, Dothan, and Goldsboro soils have a Bt horizon at a depth of less than 20 inches. The Fuquay soils have a Bt horizon at a depth of 20 to 40 inches. The Lakeland soils are in the higher landscape positions, are excessively drained, and do not have an argillic horizon within a depth of 80 inches.

### ***Typical Pedon***

Blanton sand, in an area of Blanton-Lakeland complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Gap Lake NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 34 minutes 1.83 seconds N. and long. 85 degrees 36 minutes 22.22 seconds W.

Ap—0 to 6 inches; dark gray (2.5Y 4/1) sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.

E1—6 to 22 inches; yellowish brown (10YR 5/4) sand; single grain; loose; strongly acid; gradual wavy boundary.

E2—22 to 56 inches; brown (7.5YR 5/4) sand; single grain; loose; moderately acid; abrupt smooth boundary.

Bt1—56 to 61 inches; yellowish brown (10YR 5/4) sandy loam; weak fine subangular blocky structure; very friable; common medium distinct pale brown (10YR 6/3) iron depletions; moderately acid; clear smooth boundary.

Bt2—61 to 80 inches; pale brown (10YR 6/3) sandy loam; weak fine subangular blocky structure; very friable; few fine distinct white (10YR 8/1) iron depletions and few medium prominent strong brown (7.5YR 4/6) masses of iron accumulation; strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* 40 to 80 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

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

Texture—sand

*E horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 1 to 6; masses of clean sand grains in some pedons  
Texture—sand or fine sand

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8  
Texture—sandy loam, fine sandy loam, or sandy clay loam  
Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow and iron depletions in shades of gray or white; less than 5 percent plinthite within a depth of 60 inches, 0 to 12 percent plinthite below a depth of 60 inches

*Btg horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 1 or 2  
Texture—sandy loam, fine sandy loam, or sandy clay loam  
Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow and iron depletions in shades of gray or white; 0 to 12 percent plinthite below a depth of 60 inches

## **Bonifay Series**

*Drainage class:* Well drained

*Permeability:* Moderately slow

*Parent material:* Sandy and loamy marine deposits

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Ridges and side slopes on marine terraces

*Landform position:* Ridgetops and side slopes

*Slope:* 0 to 5 percent

*Taxonomic classification:* Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults

The Bonifay soils are commonly associated on the landscape with Blanton, Cowarts, Dothan, Fuquay, and Lakeland soils. The Blanton soils do not have plinthite in the subsoil. The Cowarts and Dothan soils are in positions similar to those of the Bonifay soils but do not have a thick, sandy epipedon. Also, the Dothan soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches. The Fuquay soils are in positions similar to those of the Bonifay soils but have a sandy epipedon that is 20 to 40 inches thick. The Lakeland soils do not have an argillic horizon within a depth of 80 inches.

### ***Typical Pedon***

Bonifay sand, in an area of Bonifay-Fuquay complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Alford NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 42 minutes 5.39 seconds N. and long. 85 degrees 29 minutes 38.39 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) sand; single grain; loose; strongly acid; clear smooth boundary.

E1—5 to 9 inches; yellowish brown (10YR 5/4) sand; very pale brown (10YR 7/3) uncoated sand grains; single grain; loose; strongly acid; clear wavy boundary.

E2—9 to 32 inches; brownish yellow (10YR 6/6) sand; common distinct very pale brown (10YR 7/3) uncoated sand grains; single grain; loose; strongly acid; gradual wavy boundary.

E3—32 to 50 inches; brownish yellow (10YR 6/6) loamy sand; single grain; loose; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation;

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common medium distinct very pale brown (10YR 7/3) iron depletions; strongly acid; gradual wavy boundary.

Btv—50 to 80 inches; light yellowish brown (10YR 6/4) sandy clay loam; weak medium subangular blocky structure; friable; strong brown (7.5YR 5/6) and red (2.5YR 4/8) masses of iron accumulation; about 20 percent, by volume, plinthite; strongly acid.

### ***Range in Characteristics***

*Thickness of the solum:* 60 to more than 80 inches

*Concentrations:* 5 percent, by volume, or more plinthite at a depth of 42 to 60 inches

*Thickness of sandy material:* 40 to 80 inches

*Reaction:* Strongly acid or moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 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 8

Texture—sand or loamy sand

Redoximorphic features (where present)—few or common iron accumulations in shades of brown

*Bt horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or sandy clay loam

Redoximorphic features—few or common iron accumulation in shades of red and brown

*Btv horizon:*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8

Texture—sandy clay loam or sandy clay

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

## **Bonneau Series**

*Drainage class:* Well drained

*Permeability:* Moderate

*Parent material:* Loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Marine terraces; uplands

*Landform position:* Ridges and side slopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Loamy, siliceous, subactive, thermic Arenic Paleudults

The Bonneau soils are commonly associated on the landscape with Blanton, Bonifay, Goldsboro, and Troup soils. The Blanton and Bonifay soils are on summits and side slopes at higher elevations than the Bonneau soils and have a sandy epipedon that ranges from 40 to 80 inches in thickness. The Goldsboro soils are in the lower positions, are moderately well drained, and have a sandy epipedon that is less than 20 inches thick. The Troup soils are in the slightly higher positions, are somewhat excessively drained, and have sandy surface and subsurface horizons with a combined thickness of 40 to 80 inches.

### ***Typical Pedon***

Bonneau sand, in an area of Blanton-Bonneau complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Gap Lake NW, Florida, 7.5-minute quadrangle;

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lat. 30 degrees 33 minutes 49.89 seconds N. and long. 85 degrees 36 minutes 44.78 seconds W.

- Ap—0 to 6 inches; dark brown (10YR 3/3) sand; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary.
- E1—6 to 17 inches; yellowish brown (10YR 5/4) sand; single grain; loose; common fine roots; strongly acid; gradual wavy boundary.
- E2—17 to 25 inches; yellowish brown (10YR 5/6) sand; single grain; loose; very friable; common uncoated sand grains; few fine roots; strongly acid; gradual wavy boundary.
- Bt1—25 to 35 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular blocky structure; friable; strongly acid; gradual wavy boundary.
- Bt2—35 to 48 inches; very pale brown (10YR 7/4) sandy loam; weak fine subangular blocky structure; friable; very strongly acid; gradual wavy boundary.
- Btg—48 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; common medium prominent strong brown (7.5YR 5/8) streaks and common distinct very pale brown (10YR 8/3) pockets of sandy loam; weak fine subangular blocky structure; friable; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 60 to more than 80 inches

*Thickness of the sandy epipedon:* 20 to 40 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*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 4 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 6 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 multicolored in shades of red, brown, yellow, or gray

Redoximorphic features (where present)—few or common iron accumulations in shades of brown, red, and yellow; depletions of chroma 2 or less within a depth of 60 inches

Texture—sandy loam or sandy clay loam

*Btg horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 1 to 2; or multicolored in shades of red, brown, yellow, or gray

Redoximorphic features—few to many iron or clay depletions in shades of gray and few to many iron accumulations in shades of red and brown

Texture—sandy clay loam or sandy loam

## **Chipley Series**

*Drainage class:* Somewhat poorly drained

*Permeability:* Very rapid

*Parent material:* Sandy marine sediments

*Landscape:* Lower Coastal Plain

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*Landform:* Knolls and rises

*Slope:* 0 to 5 percent

*Taxonomic classification:* Thermic, coated Aquic Quartzipsamments

The Chipley soils are commonly associated on the landscape with Albany, Blanton, Bonneau, Foxworth, Hurricane, Leon, and Pottsburg soils. The Albany, Blanton, and Bonneau soils have a Bt horizon. The Foxworth soils are in the slightly higher positions and are moderately well drained. The Hurricane soils are in positions similar to those of the Chipley soils but have a Bh horizon below a depth 50 inches. The Leon and Pottsburg soils are in the lower positions, are poorly drained, and have a Bh horizon.

### **Typical Pedon**

Chipley fine sand, in an area of Albany-Chipley-Leon complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Red Head SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 25 minutes 37.4 seconds N. and long. 85 degrees 52 minutes 17.7 seconds W.

- Ap—0 to 8 inches; dark gray (10YR 4/1) fine sand; weak very fine granular structure; very friable; few uncoated sand grains; extremely acid; clear smooth boundary.
- C1—8 to 19 inches; light yellowish brown (2.5Y 6/4) sand; common uncoated sand grains; single grain; loose; strongly acid; clear smooth boundary.
- C2—19 to 35 inches; light gray (2.5Y 7/2) sand; single grain; loose; few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual smooth boundary.
- C3—35 to 50 inches; pale yellow (2.5Y 8/2) sand; single grain; loose; common fine prominent strong brown (7.5YR 5/8) and common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; clear smooth boundary.
- Cg—50 to 80 inches; white (2.5Y 8/1) sand; single grain; loose; few fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR, value of 2 to 5, and chroma of 1 to 3

Texture—fine sand or sand

*C horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 to 6

Texture—sand or fine sand

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow and, where present, iron depletions in shades of gray

*Cg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 or 2

Texture—sand or fine sand

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

## **Clara Series**

*Drainage class:* Poorly drained and very poorly drained

*Permeability:* Rapid throughout

*Parent material:* Sandy marine sediments

*Landscape:* Lowlands on the lower Coastal Plain

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*Landform:* Flood plains and depressions

*Slope:* Less than 2 percent

*Taxonomic classification:* Siliceous, thermic Spodic Psammaquents

The Clara soils are commonly associated on the landscape with Leon, Osier, Plummer, and Pottsburg soils. The Leon and Pottsburg soils are in the slightly higher positions and have a Bh horizon. Also, the Leon soils have a spodic horizon within a depth of 30 inches. The Osier soils are in landscape positions similar to those of the Clara soils but do not have a stained subsoil layer. The Plummer soils have a loamy argillic horizon at a depth of 40 to 79 inches.

### **Typical Pedon**

Clara sand, in an area of Clara and Plummer soils, occasionally ponded; in Washington County, Florida; USGS Fountain NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 27 minutes 47.99 seconds N. and long. 85 degrees 29 minutes 16 seconds W.

A—0 to 6 inches; very dark gray (10YR 3/1) sand, rubbed; weak fine granular structure; friable; common fine roots; very strongly acid; clear wavy boundary.

E—6 to 20 inches; pale brown (10YR 6/3) fine sand; single grain; loose; common fine roots; very strongly acid; clear wavy boundary.

Bw1—20 to 25 inches; brownish yellow (10YR 6/6) fine sand; single grain; loose; few fine and medium roots; slightly acid; gradual wavy boundary.

Bw2—25 to 60 inches; very pale brown (10YR 7/4) fine sand; single grain; loose; few medium faint brown (10YR 4/3) streaks; single grain; loose; few very fine roots; slightly acid; gradual wavy boundary.

C—60 to 80 inches; gray (10YR 6/1) fine sand; single grain; loose; slightly acid.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 60 inches; up to 3 inches of muck at the surface in some pedons

*Reaction:* Extremely acid to slightly acid throughout, except where lime has been added

*Oa horizon (where present):*

Color (rubbed)—hue of 5YR to 10YR, value of 2 or 3, and chroma of 2 or less

Texture—muck

*A horizon:*

Color (rubbed)—hue of 10YR, value of 2 to 4, and chroma of 2 or less

Texture—sand, fine sand, or mucky sand

*E horizon:*

Color—hue of 10YR, value of 6 or 7, and chroma of 1 to 3; typically, few or common vertical streaks in shades of red, brown, or gray. The vertical streaks are not present in all pedons that have chroma of 1.

Texture—fine sand or sand

*Bw horizon:*

Color—hue of 10YR; value of 4 to 7 and chroma of 3 to 6 or value of 6 or 7 and chroma of 6. In some pedons where chroma is less than 6 in the upper part of the Bw horizon, the upper part has value 1 unit darker than the overlying E horizon and has either small splotches, streaks, or discontinuous lenses or organically stained material having value of less than 4.

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

Texture—fine sand or sand

*C horizon:*

- Color—hue of 10YR; value of 6 and chroma of 2 or less or value of 6 or 7 and chroma of 3 or less
- Redoximorphic features—few or common iron masses and pore linings in shades of brown or yellow
- Texture—fine sand or sand

## **Cowarts Series**

*Drainage class:* Well drained

*Permeability:* Moderate to slow

*Parent material:* Loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Ridges and hillslopes

*Slope:* 2 to 45 percent

*Taxonomic classification:* Fine-loamy, kaolinitic, thermic Typic Kanhapludults

The Cowarts soils are commonly associated on the landscape with Blanton, Dothan, Fuquay, Lucy, Nankin, and Orangeburg soils. The Blanton soils are in positions similar to those of the Cowarts soils but have a Bt horizon at a depth of 40 to 80 inches. The Dothan soils are in smoother, less dissected positions on the landscape than the Cowarts soils and have more than 5 percent nodules of plinthite within a depth of 60 inches. The Lucy soils are in the slightly higher positions and have a Bt horizon at a depth of 20 to 40 inches. The Orangeburg soils are in smoother positions on the landscape than the Cowarts soils and have a solum that is more than 40 inches thick. Fuquay soils are in positions similar to those of the Cowarts soils but have a sandy epipedon that is 20 to 40 inches thick. The Nankin soils are in positions similar to those of the Cowarts soils but are fine textured.

### ***Typical Pedon***

Cowarts loamy sand, in an area of Nankin-Cowarts complex, 2 to 5 percent slopes, eroded (fig. 13); in Washington County, Florida; USGS Vernon NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 36 minutes 25.37 seconds N. and long. 85 degrees 41 minutes 25.69 seconds W.

- Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; strongly acid; abrupt wavy boundary.
- BE—5 to 12 inches; brown (10YR 5/6) sandy loam; weak medium granular structure; very friable; strongly acid; clear wavy boundary.
- Bt—12 to 25 inches; strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; sand grains coated and bridged with clay; about 3 percent, by volume, nodular plinthite; many coarse prominent yellowish red (5YR 5/8) and red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
- C—25 to 80 inches; 50 percent yellowish brown (10YR 5/6), 25 percent reddish brown (5YR 5/4), 20 percent light gray (10YR 7/2), and 5 percent red (10R 5/6) sandy clay loam with pockets and strata of coarser and finer textured material; massive; very firm; strongly acid.

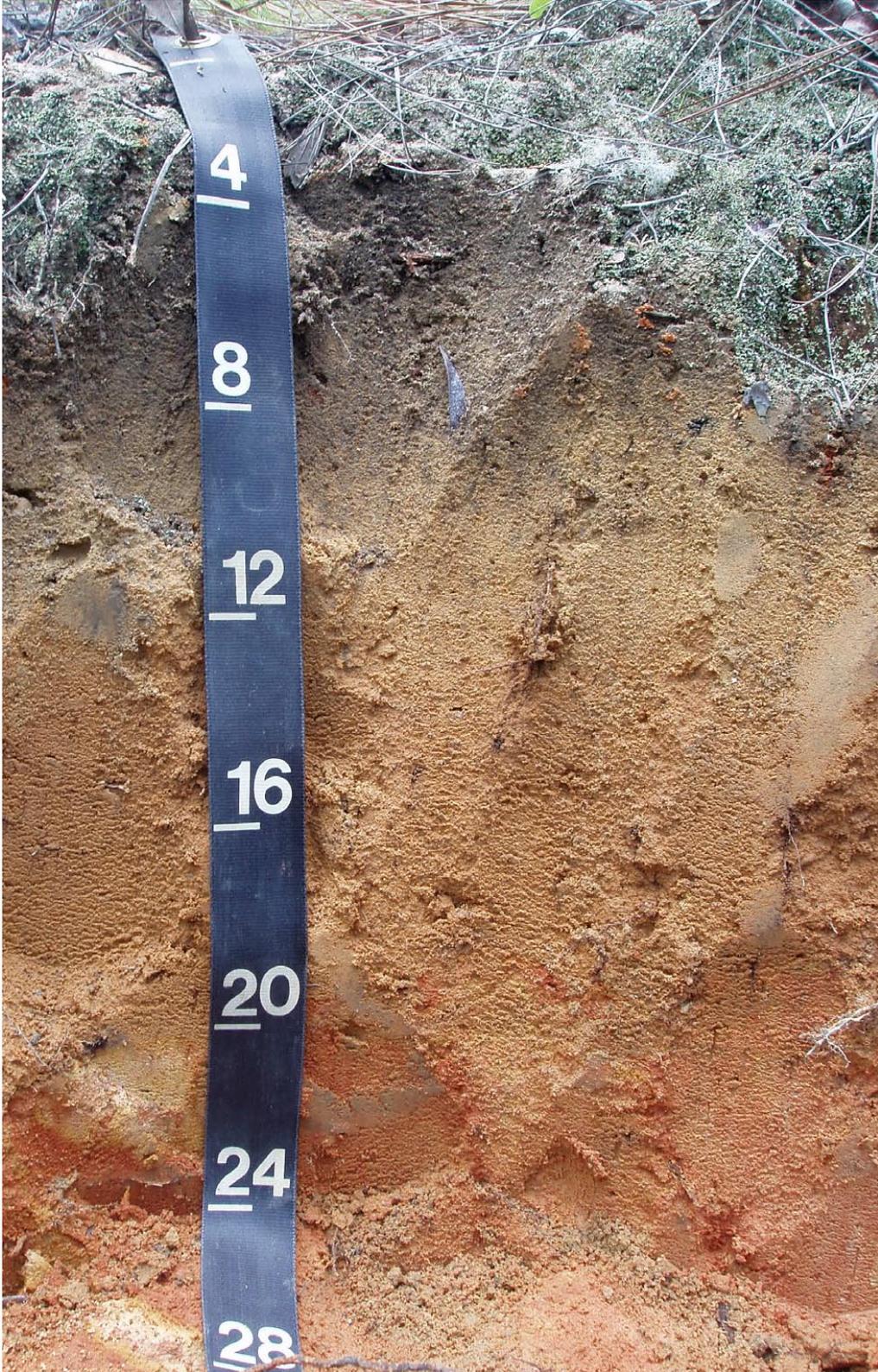
### ***Range in Characteristics***

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Very strongly acid or strongly acid throughout

*A or Ap horizon:*

- Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4



**Figure 13.—Profile of a Cowarts soil. Cowarts soils are very deep, well drained soils on ridgetops and side slopes in the uplands. Below a depth of 20 inches, these soils have many coarse yellowish red and red masses of iron accumulation that are relict and contemporary redoximorphic features. Permeability is moderately slow in the substratum. The scale is in inches.**

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Texture—loamy sand, loamy fine 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 8

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

*BE horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or fine sandy loam

*Bt horizon:*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or fine sandy loam

Redoximorphic features (where present)—few or common iron accumulations in shades of brown, red, or yellow; 0 to 5 percent plinthite

*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 brown, red, yellow, or gray

Texture—sandy loam to sandy clay

*C horizon:*

Color—hue of 10R to 10YR, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of brown, red, yellow, or gray

Texture—loamy sand to clay; layers or pockets of finer and/or coarser material in some pedons

Redoximorphic features—few or common iron accumulations in shades of brown, red, or yellow

## Dothan Series

*Drainage class:* Well drained

*Permeability:* Moderately slow or slow

*Parent material:* Unconsolidated, medium- to fine-textured marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Ridges, hills, and hillslopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Fine-loamy, kaolinitic, thermic Plinthic Kandiodults

The Dothan soils are commonly associated on the landscape with Albany, Blanton, Fuquay, Goldsboro, Orangeburg, and Stilson soils. The Albany, Blanton, and Stilson soils are in the lower positions and have a Bt horizon below a depth of 40 inches. The Fuquay soils are in positions similar to those of the Dothan soils but have a Bt horizon at a depth of 20 to 40 inches and a plinthic layer. The Goldsboro soils are in the slightly lower positions and are moderately well drained. The Orangeburg soils are in landscape positions similar to those of the Dothan soils but contain less than 5 percent, by volume, plinthite within a depth of 80 inches.

### **Typical Pedon**

Dothan loamy sand, 0 to 2 percent slopes (fig. 14); in Washington County, Florida; USGS Chipley NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 48 minutes 57.13 seconds N. and long. 85 degrees 33 minutes 9.51 seconds W.

A—0 to 8 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; very strongly acid; clear smooth boundary.

E—8 to 10 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; friable; very strongly acid; gradual smooth boundary.



Figure 14.—Profile of Dothan loamy sand. Dothan soils formed in thick beds of unconsolidated, medium- to fine-textured marine sediments. Redoximorphic features are at a depth of 44 inches. They consist of masses of iron accumulation in shades of strong brown, red, and yellow mixed with contrasting light brownish gray iron depletions. They are an indication of seasonal wetness. At a depth of 36 to 72 inches, plinthite nodules become common, making up 5 to 20 percent of the volume. The scale is in inches.

Bt—10 to 35 inches; brownish yellow (10YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; very strongly acid; clear wavy boundary.  
Btv—35 to 80 inches; 40 percent brownish yellow (10YR 6/8), 35 percent yellowish brown (10YR 5/6), and 25 percent light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; 11 percent (common) coarse spherical moderately cemented plinthite nodules with diffuse boundaries throughout, 10 percent (common) coarse spherical very weakly cemented plinthite nodules with diffuse boundaries throughout, and 10 percent (common) masses of oxidized iron; very strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 2 to 4

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

*E horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6

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

*BE or BA horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8

Texture—sandy loam or fine sandy loam

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or fine sandy loam

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

*Btv horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 8, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of brown, gray, red, and yellow

Texture—sandy clay loam, clay loam, or sandy clay

Redoximorphic features—few to many masses of iron accumulation in shades of brown, red, or yellow and iron depletions in shades of gray; 5 to 25 percent plinthite

## **Dunbar Series**

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderately slow

*Parent material:* Clayey marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Flats

*Landform position:* Smooth and slightly concave slopes

*Slope:* 0 to 5 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Aeric Paleaquults

The Dunbar soils are commonly associated on the landscape with Bladen, Clarendon, Goldsboro, and Grady soils. The Bladen soils are poorly drained and have mixed mineralogy. The Clarendon soils are in the slightly higher positions, have plinthite in the subsoil, and are moderately well drained. The Goldsboro soils are also

in the slightly higher positions and are moderately well drained. The Grady soils are in the lower positions and are poorly drained.

### ***Typical Pedon***

Dunbar loamy sand, in an area of Bladen-Dunbar complex, occasionally flooded; in Washington County, Florida; USGS Alford NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 43 minutes 29.23 seconds N. and long. 85 degrees 26 minutes 29.72 seconds W.

- Ap—0 to 10 inches; dark grayish brown (2.5Y 4/2) loamy sand; weak medium and fine granular structure; very friable; many fine roots; strongly acid; clear smooth boundary.
- Bt—10 to 20 inches; light yellowish brown (2.5Y 6/4) clay loam; moderate medium subangular blocky structure; hard, firm, sticky and plastic; many fine roots; few fine pores; few faint clay films; few medium distinct dark gray (10YR 4/1) iron depletions; very strongly acid; gradual wavy boundary.
- Btg1—20 to 35 inches; light brownish gray (2.5Y 6/2) sandy clay; moderate medium subangular blocky structure; firm, hard, sticky and plastic; few fine roots and pores; common distinct clay films on faces of peds; many medium distinct yellowish brown (10YR 5/8) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.
- Btg2—35 to 55 inches; gray (2.5Y 6/1) clay loam; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few fine roots and pores; few faint clay films on faces of peds; common medium distinct yellowish brown (10YR 5/8) and yellowish red (5YR 5/8) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.
- Btg3—55 to 65 inches; gray (2.5Y 6/1) sandy clay; moderate medium subangular blocky structure; firm; few fine roots and pores; few faint clay films on faces of peds; few medium distinct yellowish brown (10YR 5/4) and brown (10YR 5/3) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.
- Cg—65 to 80 inches; light gray (10YR 7/1) sandy clay that has a few pockets of sandy clay loam; massive; firm; very strongly acid.

### ***Range in Characteristics***

*Thickness of the solum:* More than 60 inches

*Content and size of rock fragments:* None

*Content of plinthite:* Less than 3 percent throughout

*Reaction:* Very strongly acid or strongly acid throughout

*A or Ap horizon:*

Color—hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 or 2. Where value is 3 or less, the horizon is less than 10 inches thick.

Texture—loamy sand, fine sandy loam, or loam

*E horizon (where present):*

Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4; or neutral in hue and value of 4 to 6

Texture—sandy loam, fine sandy loam, or loam

*Bt horizon:*

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 3 to 8

Texture—clay loam, sandy clay, or clay

Redoximorphic features—few or common iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, or brown

*Btg horizon:*

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4 to 6

Texture—sandy clay, clay loam, or clay

Redoximorphic features—few or common iron accumulations in shades of red, yellow, or brown

*BCg horizon (where present):*

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral in hue and value of 4 to 6

Texture—sandy clay, sandy clay loam, clay loam, or clay

Redoximorphic features—few or common iron accumulations in shades of red, yellow, or brown

*Cg horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral in hue and value of 5 to 7

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

## **Fuquay Series**

*Drainage class:* Well drained

*Permeability:* Moderately slow or moderate

*Parent material:* Sandy over loamy marine deposits or fluviomarine deposits

*Landscape:* Middle Coastal Plain

*Landform:* Hills, ridges, and hillslopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Loamy, kaolinitic, thermic Arenic Plinthic Kandiodults

The Fuquay soils are commonly associated on the landscape with Albany, Blanton, Bonifay, Dothan, Goldsboro, Orangeburg, and Stilson soils. The Albany soils are in the lower positions, are somewhat poorly drained, and have a Bt horizon below a depth of 40 inches. The Blanton, Bonifay, and Stilson soils are in the slightly lower positions. The Blanton soils are moderately well drained and have a Bt horizon at a depth of 40 to 80 inches. The Bonifay soils have a plinthic layer and have an argillic horizon below a depth of 40 inches. The Stilson soils are moderately well drained and have plinthic and argillic horizons at a depth of 20 to 40 inches. The Dothan soils and the moderately well drained Goldsboro soils are in positions similar to those of the Fuquay soils but have a Bt horizon at a depth of less than 20 inches. The Orangeburg soils are in slightly higher positions than the Fuquay soils.

### **Typical Pedon**

Fuquay sand, in an area of Bonifay-Fuquay complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Alford NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 41 minutes 32.11 seconds N. and long. 85 degrees 29 minutes 16.92 seconds W.

Ap—0 to 7 inches; brown (10YR 4/3) sand; single grain; loose; common fine roots; strongly acid; abrupt smooth boundary.

E1—7 to 31 inches; brownish yellow (10YR 6/6) sand; single grain; loose; few fine roots; strongly acid; diffuse wavy boundary.

E2—31 to 36 inches; brownish yellow (10YR 6/6) loamy sand; single grain; loose; very strongly acid; clear wavy boundary.

Bt—36 to 50 inches; reddish yellow (7.5YR 6/6) sandy clay loam; weak medium subangular blocky structure; very friable; few fine and medium prominent light brownish gray (10YR 6/2) iron depletions; about 7 percent, by volume, nodular plinthite; very strongly acid; gradual wavy boundary.

Btv1—50 to 60 inches; 50 percent strong brown (7.5YR 5/6) and 50 percent yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; firm; about 7 percent, by volume, nodular plinthite; few fine and medium prominent light gray (10YR 7/2) iron depletions; very strongly acid; gradual wavy boundary.  
Btv2—60 to 80 inches; 55 percent strong brown (7.5YR 5/6) and 45 percent yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; firm; about 15 percent, by volume, nodular plinthite; few fine and medium prominent light gray (10YR 7/2) iron depletions; very strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* 20 to 40 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 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 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay loam or sandy loam

Redoximorphic features (where present)—few or common masses of iron accumulation in shades of brown, red, or yellow and iron depletions in shades of gray

*Btv horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 2 to 8; or multicolored in shades of brown, yellow, red, olive, and gray

Texture—sandy clay loam or sandy loam

Redoximorphic features (where present)—few or common masses of iron accumulation in shades of brown, red, or yellow and iron depletions in shades of gray; 5 to 32 percent plinthite

*C horizon (where present):*

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

Texture—loamy sand or sandy loam

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

## **Goldsboro Series**

*Drainage class:* Moderately well drained

*Permeability:* Moderate

*Parent material:* Loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Knolls and rises

*Slope:* 0 to 8 percent

*Taxonomic classification:* Fine-loamy, siliceous, subactive, thermic Aquic Paleudults

The Goldsboro soils are commonly associated on the landscape with Albany, Blanton, Bonneau, Dothan, Fuquay, Grady, and Lynchburg soils. The Albany soils are in the lower positions, are somewhat poorly drained, and have a Bt horizon below a depth of 40 inches. The Blanton soils are in positions similar to those of the Goldsboro

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soils but have a Bt horizon below a depth of 40 inches. The Bonneau soils are in the higher positions, are well drained, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches. The Dothan and Fuquay soils are in the slightly higher positions and are well drained. Also, the Fuquay soils have a Bt horizon at a depth of 20 to 40 inches. The Grady soils are in the lower positions, are poorly drained, and have a clayey subsoil. The Lynchburg soils are in the slightly lower positions and are somewhat poorly drained.

### **Typical Pedon**

Goldsboro loamy sand, 2 to 5 percent slopes; in Washington County, Florida; USGS Chipley SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 47 minutes 57.41 seconds N. and long. 85 degrees 35 minutes 12.74 seconds W.

Ap—0 to 7 inches; very dark grayish brown (2.5Y 3/2) loamy sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.

E—7 to 12 inches; light olive brown (2.5Y 5/4) loamy sand; weak fine granular structure; very friable; very strongly acid; clear wavy boundary.

Bt1—12 to 22 inches; olive yellow (2.5Y 6/6) sandy clay loam; weak fine subangular blocky structure; friable; very strongly acid; gradual wavy boundary.

Bt2—22 to 40 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak fine subangular blocky structure; friable; common medium prominent yellowish red (5YR 5/6) and common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; common fine distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Btg—40 to 80 inches; grayish brown (2.5Y 5/2) sandy clay loam; weak fine subangular blocky structure; friable; common medium prominent red (2.5YR 4/6), strong brown (7.5YR 5/6), and light yellowish brown (10YR 6/4) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 1 to 4

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

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6

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

*Bt horizon (upper part):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or clay loam

*Bt horizon (lower part):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or clay loam

Redoximorphic features (where present)—few or common masses of iron accumulation in shades of brown, red, or yellow and iron depletions in shades of gray

*Btg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

Texture—sandy clay loam, sandy loam, or clay loam

Redoximorphic features (where present)—few to many iron accumulations in shades of brown, red, or yellow

*Cg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy, loamy, or clayey; stratified in some pedons

Redoximorphic features (where present)—few to many iron accumulations in shades of brown, red, or yellow

## **Grady Series**

*Drainage class:* Very poorly drained

*Permeability:* Slow

*Parent material:* Clayey marine sediments

*Landscape:* Middle and lower Coastal Plain

*Landform:* Depressions

*Landform position:* Concavities

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Paleaquults

The Grady soils are commonly associated on the landscape with Dunbar, Goldsboro, Lynchburg, Ocilla, and Rains soils. The Dunbar, Goldsboro, Lynchburg, and Ocilla soils are in the higher positions. The Dunbar soils are somewhat poorly drained. The Goldsboro soils have a fine-loamy subsoil and are moderately well drained. The Lynchburg soils are somewhat poorly drained and are fine-loamy. The Ocilla soils are somewhat poorly drained and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches. The Rains soils are in positions similar to those of the Grady soils but have a fine-loamy control section.

### **Typical Pedon**

Grady loam, ponded; in Washington County, Florida; USGS Chipley NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 48 minutes 55.05 seconds N. and long. 85 degrees 32 minutes 39.61 seconds W.

A—0 to 8 inches; very dark gray (10YR 3/1) loam; moderate medium granular structure; friable; many fine roots; strongly acid; clear smooth boundary.

BE—8 to 16 inches; dark grayish brown (10YR 4/2) sandy clay loam; moderate medium subangular blocky structure; very firm; common fine roots; common distinct clay films on faces of peds; very strongly acid; gradual smooth boundary.

Btg1—16 to 45 inches; light brownish gray (10YR 6/2) clay; moderate medium subangular blocky structure; very firm; few fine roots; common distinct clay films on faces of peds; very strongly acid; gradual smooth boundary.

Btg2—45 to 80 inches; light brownish gray (10YR 6/2) clay; moderate medium subangular blocky structure; very firm; common distinct clay films on faces of peds; common medium distinct yellowish brown (10YR 5/8) and common medium prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* More than 60 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

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

Texture—loam or clay loam

*BE horizon (where present):*

Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2

Texture—sandy clay loam or clay loam

*Btg horizon:*

Color—hue of 10YR to 5Y, value of 5 or 6, and chroma of 1 or 2

Texture—clay or sandy clay in the upper part and clay in the lower part

Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow, brown, and red

## **Gritney Series**

*Drainage class:* Moderately well drained

*Permeability:* Slow

*Parent material:* Fine-textured marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Hillslopes and ridgetops

*Landform position:* Ridges and short side slopes

*Slope:* 2 to 5 percent

*Taxonomic classification:* Fine, mixed, semiactive, thermic Aquic Hapludults

The Gritney soils are commonly associated on the landscape with Cowarts, Dothan, Goldsboro, and Orangeburg soils. The Cowarts and Dothan soils are in landscape positions similar to those of the Gritney soils but are at higher elevations and are fine-loamy. Also, the Dothan soils have more than 5 percent plinthite in the B horizon above 60 inches. The Orangeburg soils do not have low-chroma redoximorphic depletions in the upper part of the argillic horizon.

### ***Typical Pedon***

Gritney loamy sand, 2 to 5 percent slopes; in Washington County, Florida; USGS Caryville SE, Florida, 7.5-minute quadrangle; lat. 30 degrees 46 minutes 45.18 seconds N. and long. 85 degrees 47 minutes 37.29 seconds W.

Ap—0 to 9 inches; dark olive brown (2.5Y 3/3) loamy sand; weak fine granular structure; very friable; few fine and medium roots; moderately acid; abrupt wavy boundary.

Bt1—9 to 35 inches; brownish yellow (10YR 6/6) clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; common medium prominent red (2.5YR 4/6) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Bt2—35 to 45 inches; yellowish brown (10YR 5/6) sandy clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; common medium prominent dark red (10R 3/6) masses of iron accumulation; few medium distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Cg—45 to 80 inches; 40 percent light brownish gray (10YR 6/2), 40 percent dark red (10R 3/6), and 20 percent yellowish brown (10YR 5/6) sandy clay loam; massive; firm; few thin strata of sandy loam; light brownish gray (10YR 6/2) areas are iron depletions; very strongly acid.

### ***Range in Characteristics***

*Thickness of the solum:* 35 to 60 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

## Soil Survey of Washington County, Florida

### *A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4  
Texture—loamy 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 fine sandy loam

### *Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8  
Redoximorphic features—few to many in shades of red, brown, yellow, or gray  
Texture—clay or sandy clay

### *Cg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2  
Redoximorphic features—common in shades of red, brown, yellow, or gray  
Texture—dominantly sandy clay loam, sandy loam, or clay loam with lenses, pockets, or strata of sandy loam

## Hannon Series

*Drainage class:* Moderately well drained

*Permeability:* Very slow

*Parent material:* Clayey marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Ridges and hillslopes

*Landform position:* Shoulders and backslopes

*Slope:* 5 to 8 percent

*Taxonomic classification:* Fine, smectitic, thermic Chromic Hapluderts

The Hannon soils are commonly associated on the landscape with Oktibbeha and Searcy soils. These associated soils are in positions similar to those of the Hannon soils but are at higher elevations. The Oktibbeha soils are very-fine textured and do not have carbonates within a depth of 30 inches. The Searcy soils do not have carbonates. In the lower part of the argillic horizon, the Searcy soils do not have a dominant matrix color and are multicolored.

### **Typical Pedon**

Hannon clay loam, in an area of Hannon-Oktibbeha complex, 5 to 8 percent slopes; in Washington County, Florida; USGS Wausau NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 42 minutes 22.65 seconds N. and long. 85 degrees 35 minutes 35.38 seconds W.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) clay loam; weak medium subangular blocky structure; friable; many fine and medium roots; extremely acid; clear wavy boundary.

Bt—5 to 10 inches; strong brown (7.5YR 4/6) clay; strong fine and medium angular blocky structure; firm; common fine and medium roots; few faint clay films on faces of peds and in pores; very strongly acid; clear wavy boundary.

Bss1—10 to 20 inches; dark yellowish brown (10YR 4/6) clay; strong fine and medium angular blocky structure; firm; common fine and medium roots; common intersecting slickensides that have distinct polished and grooved surfaces; few faint clay films on faces of peds and in pores; few fine prominent light yellowish brown (2.5Y 6/3) iron depletions; few fine distinct yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bss2—20 to 25 inches; light olive brown (2.5Y 5/4) clay; strong fine and medium angular blocky structure; firm; few fine and medium roots; few faint clay films on

faces of peds and in pores; common large intersecting slickensides that have distinct polished and grooved surfaces; common medium and coarse distinct light grayish brown (2.5Y 5/2) iron depletions on surfaces of peds; common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bkss—25 to 80 inches; light olive brown (2.5Y 5/6) clay loam; moderate and strong medium angular blocky structure; firm; few fine roots; few distinct clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; many fine and medium soft masses of calcium carbonate; strongly effervescent; neutral.

### ***Range in Characteristics***

*Depth to secondary carbonates:* 12 to 30 inches

*Reaction:* Extremely acid to neutral in the A and Bt horizons, strongly acid to slightly alkaline in the Bss horizon, and neutral to strongly alkaline in the Bkss horizon

*A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4

Texture—clay loam

*Bt horizon:*

Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8

Texture—clay

Redoximorphic features (where present)—iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown, yellow, or red

*Bss horizon:*

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

Texture—clay or clay loam

Redoximorphic features (where present)—iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown, yellow, or red

*Bkss horizon:*

Color—hue of 2.5Y or 5Y, value of 5 or 6, and chroma of 4 to 6

Texture—clay loam or clay

Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow and brown

Calcium carbonate—common or many soft masses and few or common concretions

*BC horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 8; or no dominant matrix color and multicolored in shades of gray, red, brown, or olive

Texture—clay, clay loam, or sandy clay loam

Redoximorphic features—iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown, olive, or red

## **Hurricane Series**

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderately rapid

*Parent material:* Sandy marine sediments

*Landscape:* Lower Coastal Plain

*Landform:* Knolls and rises

*Slope:* 0 to 3 percent

*Taxonomic classification:* Sandy, siliceous, thermic Oxyaquic Alorthods

## Soil Survey of Washington County, Florida

The Hurricane soils are commonly associated on the landscape with Albany, Chipley, Leon, Osier, and Pottsburg soils. The Albany soils have an argillic horizon at a depth of 40 to 80 inches and do not have a spodic horizon. The Chipley soils are in positions similar to those of the Hurricane soils but do not have a Bh horizon. The Leon, Osier, and Pottsburg soils are in the lower positions. The Leon soils have a Bh horizon at a depth of 10 to 30 inches and are poorly drained. The Osier soils do not have a Bh horizon and are more poorly drained than the Hurricane soils. The Pottsburg soils are poorly drained.

### **Typical Pedon**

Hurricane sand, in an area of Chipley-Albany-Hurricane complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Red Head NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 28 minutes 46.9 seconds N. and long. 85 degrees 48 minutes 18.7 seconds W.

- Ap—0 to 6 inches; very dark gray (2.5Y 3/1) sand; single grain; loose; very strongly acid; clear smooth boundary.
- E1—6 to 12 inches; light olive brown (2.5Y 5/3) sand; single grain; loose; strongly acid; gradual wavy boundary.
- E2—12 to 35 inches; light yellowish brown (2.5Y 6/4) sand; single grain; loose; many medium masses of clean sand grains; strongly acid; clear wavy boundary.
- Eg—35 to 55 inches; light gray (2.5Y 7/2) sand; single grain; loose; many fine and medium prominent reddish yellow (7.5YR 6/8) and many fine prominent yellowish red (5YR 5/8) masses of iron accumulation; strongly acid; clear irregular boundary.
- Bh—55 to 80 inches; very dark grayish brown (10YR 3/2) fine sand; weak fine subangular blocky structure; very friable; strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3

Texture—sand

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8

Texture—sand or fine sand

Redoximorphic features (where present)—few to many iron accumulations in shades of brown, red, or yellow

*Eg horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sand or fine sand

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

*EB or BE horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 4, and chroma of 2 or 3

Texture—sand, fine sand, loamy sand, or loamy fine sand

Redoximorphic features—few or common iron accumulations in shades of red or yellow and iron depletions in shades of gray

*Bh horizon:*

Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 2 or less

Texture—fine sand, sand, loamy sand, or loamy fine sand

## Lakeland Series

*Drainage class:* Excessively drained

*Permeability:* Rapid

*Parent material:* Sandy marine sediments

*Landscape:* Middle and lower Coastal Plain

*Landform:* Ridges, hills, knolls, and hillslopes

*Slope:* 0 to 45 percent

*Taxonomic classification:* Thermic, coated Typic Quartzipsamments

The Lakeland soils are commonly associated on the landscape with Blanton, Bonifay, Cowarts, Fuquay, Lucy, and Troup soils. The Blanton, Bonifay, and Troup soils are in positions similar to those of the Lakeland soils but have a loamy argillic horizon within a depth of 40 to 80 inches. The Cowarts soils have an argillic horizon within a depth of 20 inches. The Fuquay and Lucy soils have an argillic horizon within a depth of 20 to 40 inches.

### Typical Pedon

Lakeland sand, 0 to 5 percent slopes (fig. 15); in Washington County, Florida; USGS Vernon SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 31 minutes 49.3 seconds N. and long. 85 degrees 42 minutes 51.7 seconds W.

A—0 to 7 inches; brown (10YR 4/3) sand; weak fine granular structure; very friable; very strongly acid; clear wavy boundary.

C1—7 to 30 inches; olive yellow (2.5Y 6/6) sand; single grain; loose; strongly acid; diffuse wavy boundary.

C2—30 to 54 inches; yellow (10YR 7/6) sand; single grain; loose; many uncoated sand grains; strongly acid; diffuse wavy boundary.

C3—54 to 80 inches; brownish yellow (10YR 6/6) sand; single grain; loose; many very pale brown (10YR 7/3) uncoated sand grains; strongly acid.

### Range in Characteristics

*Thickness of sandy material:* More than 80 inches

*Reaction:* Very strongly acid to slightly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 4

Texture—sand or fine sand

*C horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; small masses of uncoated sand grains in some pedons. The masses are not related to wetness.

Texture—sand

## Leefield Series

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderately slow or slow

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Rises on marine terraces

*Slope:* 0 to 5 percent

*Taxonomic classification:* Loamy, siliceous, subactive, thermic Arenic Plinthaquic Paleudults



**Figure 15.—Profile of Lakeland sand. Lakeland soils are very deep, are excessively drained, and formed in thick beds of eolian or marine sands. The thickness of the sand exceeds 80 inches. Lakeland soils are in nearly level to steep areas of the Coastal Plain uplands and on side slopes. The scale is in inches.**

## Soil Survey of Washington County, Florida

The Leefield soils are commonly associated on the landscape with Albany, Bladen, Dothan, Fuquay, Lynchburg, Plummer, and Rains soils. The Albany and Plummer soils have an argillic horizon at a depth of 40 to 80 inches. The Bladen and Rains soils are in the lower positions and are poorly drained. The Dothan soils have an argillic horizon within a depth of 20 inches and are well drained. The Fuquay soils are well drained. The Lynchburg soils are in positions similar to those of the Leefield soils but have a Bt horizon within a depth of 20 inches.

### **Typical Pedon**

Leefield loamy sand, in an area of Ocilla-Leefield complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Poplar Head NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 43 minutes 54.48 seconds N. and long. 85 degrees 40 minutes 43.99 seconds W.

Ap—0 to 5 inches; very dark grayish brown (2.5Y 3/2) loamy sand; weak fine granular structure; very friable; very strongly acid; abrupt wavy boundary.

E1—5 to 20 inches; light olive brown (2.5Y 5/4) loamy sand; single grain; loose; very strongly acid; clear wavy boundary.

E2—20 to 30 inches; light yellowish brown (2.5Y 6/4) loamy sand; single grain; loose; strongly acid; gradual wavy boundary.

Bt—30 to 33 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; friable; common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation; few medium distinct light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

Btv1—33 to 55 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; about 10 percent, by volume, plinthite nodules; common medium prominent strong brown (7.5YR 5/8) and reddish brown (2.5YR 4/4) masses of iron accumulation; strongly acid; gradual smooth boundary.

Btv2—55 to 80 inches; brown (10YR 5/3) sandy clay loam; common medium prominent brownish yellow (10YR 6/8), light gray (5Y 7/1), and yellowish red (5YR 5/8) mottles; moderate medium subangular blocky structure; friable; 5 percent plinthite nodules; very strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* 20 to 40 inches

*Reaction:* Very strongly acid or strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2

Texture—loamy sand or sand

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 8

Texture—loamy sand, sand, fine sand, or loamy fine sand

Redoximorphic features (where present)—few to many iron accumulations in shades of brown or yellow and iron depletions in shades of gray

*BE horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 3 to 8

Texture—loamy sand or sandy loam

Redoximorphic features (where present)—few to many iron accumulations in shades of brown or yellow and iron depletions in shades of gray

*Bt horizon:*

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

Texture—sandy loam, fine sandy loam, or sandy clay loam

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

*Btv horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of brown, red, yellow, and gray

Texture—sandy clay loam, sandy loam, or fine sandy loam

Redoximorphic features—common to many iron accumulations in shades of brown, red, or yellow and iron depletions in shades of gray; 5 to 15 percent, by volume, plinthite

## Leon Series

*Drainage class:* Poorly drained

*Permeability:* Moderate or moderately slow

*Parent material:* Sandy marine sediments

*Landscape:* Lower Coastal Plain

*Landform:* Flats of the Gulf Flatwoods

*Slope:* 0 to 2 percent

*Taxonomic classification:* Sandy, siliceous, thermic Aeric Alaquods

The Leon soils are commonly associated on the landscape with Chipley, Hurricane, Osier, and Pottsburg soils. The Chipley and Hurricane soils are in the slightly higher positions. The Chipley soils are somewhat poorly drained and do not have a Bh horizon. The Hurricane soils are somewhat poorly drained and have a Bh horizon below a depth of 50 inches. The Osier soils are in the slightly lower positions and do not have a Bh horizon. The Pottsburg soils are in positions similar to those of the Leon soils but have a Bh horizon below a depth of 50 inches.

### **Typical Pedon**

Leon sand, in an area of Albany-Chipley-Leon complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Millers Ferry SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 32 minutes 5.5 seconds N. and long. 85 degrees 50 minutes 23.43 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) sand; weak fine granular structure; very friable; extremely acid; abrupt wavy boundary.

E—4 to 10 inches; light gray (10YR 7/1) sand; single grain; loose; common medium faint very dark gray (10YR 3/1) streaks of organic matter accumulation; strongly acid; gradual irregular boundary.

Bh—10 to 30 inches; dark brown (7.5YR 3/3) sand; weak fine granular structure; very friable; very strongly acid; gradual wavy boundary.

E'—30 to 35 inches; light gray (10YR 7/2) sand; single grain; loose; common fine and medium pores; very strongly acid; clear wavy boundary.

B'h—35 to 51 inches; 90 percent very dark brown (10YR 2/2) and 10 percent dark yellowish brown (10YR 3/4) sand; weak medium and coarse subangular blocky structure; friable; common fine and medium pores; very strongly acid; clear wavy boundary.

C—51 to 80 inches; light gray (10YR 7/1) sand; single grain; loose; strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to slightly acid throughout, except where lime has been applied

## Soil Survey of Washington County, Florida

### *A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 or 2; salt-and-pepper appearance in some pedons due to organic matter and clean sand grains

Texture—sand

### *E horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 to 2

Texture—sand or fine sand

Redoximorphic features (where present)—few or common iron depletions in shades of gray; few or common streaks and masses of organic matter accumulation (Bh material) in shades of black to brown

### *Bh horizon:*

Color—hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 4; few or common vertical or horizontal streaks or pockets of sand in shades of gray in some pedons

Texture—sand, fine sand, loamy sand, or loamy fine sand

### *E' horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 3; few or common streaks and masses of organic matter accumulation in shades of black to brown in some pedons

Texture—sand, fine sand, loamy sand, or loamy fine sand

### *B'h horizon (where present):*

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

Texture—sand, fine sand, loamy sand, or loamy fine sand

### *C horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 6

Texture—sand or fine sand

## Lucy Series

*Drainage class:* Well drained

*Permeability:* Moderate

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Hills, ridges, and hillslopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Loamy, kaolinitic, thermic Arenic Kandiodults

The Lucy soils are commonly associated on the landscape with Cowarts, Fuquay, Orangeburg, and Troup soils. The Cowarts soils have sandy A and E horizons with a combined thickness of less than 20 inches. The Fuquay soils have a loamy subsoil at a depth of 20 to 40 inches and have greater than 5 percent plinthite in the subsoil. The Orangeburg soils have a loamy subsoil within a depth of 20 inches and contain 0 to 10 percent iron nodules in the subsoil. The Troup soils have a loamy subsoil below a depth of 40 inches and are somewhat excessively drained.

### **Typical Pedon**

Lucy sand, 0 to 5 percent slopes; in Washington County, Florida; USGS Alford SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 39 minutes 38.89 seconds N. and long. 85 degrees 29 minutes 58.05 seconds W.

Ap—0 to 10 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; very strongly acid; abrupt smooth boundary.

## Soil Survey of Washington County, Florida

- E—10 to 28 inches; brownish yellow (10YR 6/6) loamy sand; weak fine granular structure; very friable; strongly acid; gradual wavy boundary.
- Bt1—28 to 35 inches; strong brown (7.5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; strongly acid; gradual wavy boundary.
- Bt2—35 to 58 inches; red (2.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; strongly acid; gradual wavy boundary.
- Bt3—58 to 80 inches; red (2.5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* 20 to 40 inches

*Reaction:* Very strongly acid to moderately acid in the A and E horizons, except where lime has been applied, and very strongly acid or strongly acid in the subsoil

*A or Ap horizon:*

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

Texture—sand

*E horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 3 to 8

Texture—loamy sand, sand, or fine sand

*BE horizon (where present):*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 6 to 8

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

*Bt horizon:*

Color—dominantly hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 6 to 8. In some pedons that do not have a BE horizon, the upper part of the Bt horizon is less than 10 inches thick and has hue of 7.5YR or 10YR.

Texture—sandy loam, fine sandy loam, or sandy clay loam

Redoximorphic features (where present)—few or common iron accumulations in shades of brown

## **Lynchburg Series**

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderate

*Parent material:* Loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Flats on marine terraces

*Slope:* 0 to 5 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults

The Lynchburg soils are commonly associated on the landscape with Bladen, Goldsboro, Leefield, Ocilla, and Rains soils. The Bladen and Rains soils are in the lower positions and are poorly drained. The Goldsboro soils are moderately well drained. The Ocilla soils are in positions similar to those of the Lynchburg soils but have a thick, sandy epipedon. The Leefield soils are also in positions similar to those of the Lynchburg soils but have a Bt horizon at a depth of 20 to 40 inches.

### **Typical Pedon**

Lynchburg loamy fine sand, 0 to 2 percent slopes; in Washington County, Florida; USGS Chipley SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 47 minutes 56.18 seconds N. and long. 85 degrees 35 minutes 9.90 seconds W.

## Soil Survey of Washington County, Florida

A—0 to 10 inches; very dark gray (10YR 3/1) loamy fine sand; weak medium granular structure; very friable; strongly acid; clear smooth boundary.

E—10 to 16 inches; olive brown (2.5Y 4/3) loamy sand; weak fine granular structure; very friable; few fine faint brown (7.5YR 5/3) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt—16 to 19 inches; light olive brown (2.5Y 5/3) sandy clay loam; weak medium subangular blocky structure; friable; few fine faint yellowish brown (10YR 5/6) and common fine faint yellowish red (5YR 5/6) masses of iron accumulation; few fine faint light brownish gray (2.5Y 6/2) iron depletions; very strongly acid; clear wavy boundary.

Btg1—19 to 28 inches; gray (10YR 5/1) sandy clay loam; weak medium subangular blocky structure; friable; many medium prominent reddish brown (5YR 4/4) and common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; common fine faint brown (7.5YR 5/3) iron depletions; very strongly acid; clear wavy boundary.

Btg2—28 to 60 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; firm; many medium prominent brown (7.5YR 4/4) and many medium prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

BCg—60 to 80 inches; gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; very firm; common medium prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; very strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2

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

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4

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

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

*Bt horizon:*

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8

Texture—sandy clay loam or clay loam

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

*Btg horizon:*

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

Texture—sandy clay loam or clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

*BCg horizon:*

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

Texture—sandy clay, sandy clay loam, or clay

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

## Nankin Series

*Drainage class:* Well drained

*Permeability:* Moderately slow

*Parent material:* Loamy and clayey marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Upland marine terraces

*Slope:* 2 to 45 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Kanhapludults

The Nankin soils are commonly associated on the landscape with Bonifay, Cowarts, Dothan, Fuquay, and Orangeburg soils. The Dothan, Fuquay, and Tifton soils have a fine-loamy control section and have more than 5 percent plinthite in the B horizon. The Cowarts soils are in positions similar to those of the Nankin soils but are fine-loamy. The Dothan soils have more than 5 percent plinthite and are fine-loamy. The Fuquay soils have more than 5 percent plinthite and have a sandy epipedon that ranges from 20 to 40 inches in thickness. The Orangeburg soils are fine-loamy.

### **Typical Pedon**

Nankin sandy loam, in an area of Nankin-Cowarts complex, 2 to 5 percent slopes, eroded (fig. 16); in Washington County, Florida; USGS Hinsons Crossroads SE, Florida, 7.5-minute quadrangle; lat. 30 degrees 38 minutes 53.32 seconds N. and long. 85 degrees 45 minutes 39.29 seconds W.

Ap—0 to 5 inches; brown (7.5YR 4/2) sandy loam; weak medium granular structure; very friable; very strongly acid; abrupt smooth boundary.

Bt1—5 to 20 inches; brown (7.5YR 4/4) sandy clay; moderate medium subangular blocky structure; firm; very strongly acid; gradual wavy boundary.

Bt2—20 to 56 inches; yellowish red (5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; very strongly acid; gradual wavy boundary.

BC—56 to 68 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; very strongly acid; gradual wavy boundary.

C—68 to 80 inches; sandy clay loam, 40 percent yellowish brown (10YR 5/8), 35 percent yellowish red (5YR 5/8), and 25 percent pinkish gray (5YR 7/2) in a variegated pattern; massive; firm; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 40 to 60 inches

*Thickness of the sandy epipedon:* Less than 20 inches

*Reaction:* Very strongly acid or strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 5

Texture—sandy loam

*BE horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or sandy clay loam

*Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Redoximorphic features—few to many in shades of red, brown, or yellow

Texture—dominantly sandy clay, clay loam, or clay; a thin layer of sandy clay loam in some pedons

*BC horizon (where present):*

Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8



**Figure 16.—Profile of a Nankin soil. Nankin soils formed in stratified loamy and clayey marine sediments. The argillic or clay horizon is yellowish red from a depth of 8 to 24 inches and is weak red and yellowish red from 24 to 55 inches. The soil has no dominant matrix color and is multicolored in shades of red, yellow, and brown below 55 inches. Most areas of Nankin soils are forestland; some areas are cropland or pasture. The scale is in inches.**

Redoximorphic features—few to many in shades of red, brown, yellow, pink, or gray

Texture—sandy clay loam or sandy clay loam having pockets of sandy loam

*C horizon:*

Color—variegated in shades of red, brown, yellow, pink, or gray

Redoximorphic features—common or many in shades of red, brown, or gray

Texture—sandy clay loam having pockets of sandy loam or sandy clay

## Ocilla Series

*Drainage class:* Somewhat poorly drained

*Permeability:* Moderate

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Flats and hills on marine terraces

*Landform position:* Stream terraces

*Slope:* 0 to 5 percent

*Taxonomic classification:* Loamy, siliceous, semiactive, thermic Aquic Arenic

Paleudults

The Ocilla soils are commonly associated on the landscape with Albany, Blanton, Bonneau, Pelham, and Rains soils. The Albany soils are in positions similar to those of the Ocilla soils but have a Bt horizon at a depth of 40 to 80 inches. The Blanton and Bonneau soils are moderately well drained. Also, the Blanton soils have a Bt horizon at a depth of 40 to 80 inches. The Pelham and Rains soils are in the lower positions and are poorly drained.

### Typical Pedon

Ocilla sand, in an area of Ocilla-Leafield complex, 0 to 5 percent slopes; in Washington County, Florida; USGS Poplar Head NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 41 minutes 30.52 seconds N. and long. 85 degrees 38 minutes 15.95 seconds W.

- A—0 to 5 inches; dark grayish brown (2.5Y 4/2) sand; weak fine granular structure; very friable; many fine and very fine roots; strongly acid; gradual wavy boundary.
- E1—5 to 12 inches; light yellowish brown (2.5Y 6/4) sand; common medium faint brownish yellow (10YR 6/6) and few medium distinct dark brown (10YR 3/3) mottles; weak fine granular structure; very friable; common uncoated sand pockets; common fine and common medium roots; very strongly acid; gradual wavy boundary.
- E2—12 to 18 inches; very pale brown (10YR 7/4) sand; weak fine granular structure; very friable; many fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; common medium distinct white (10YR 8/1) iron depletions; very few fine roots; very strongly acid; clear wavy boundary.
- E3—18 to 39 inches; light yellowish brown (10YR 6/4) sand; common distinct light brownish gray (10YR 6/2) and common fine faint yellowish brown (10YR 5/8) mottles; weak fine granular structure; very friable; about 3 percent plinthite; very strongly acid; gradual wavy boundary.
- Bt—39 to 62 inches; coarsely mottled strong brown (7.5YR 5/8), gray (10YR 6/1), and red (2.5YR 4/6) sandy clay loam; moderate fine subangular blocky structure; friable; about 3 percent plinthite; very strongly acid; gradual wavy boundary.
- Btg—62 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; common coarse prominent red (2.5YR 4/6), few medium distinct yellowish brown (10YR 5/8), and common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 60 to more than 80 inches

*Thickness of the sandy material:* 20 to 40 inches

*Content of pebbles:* Less than 5 percent

*Content of plinthite:* Less than 5 percent

*Depth to chroma of 2 or less:* 18 to 33 inches

*Reaction:* Very strongly acid or strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2

Texture—sand

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 to 4

Redoximorphic features (where present)—few or common in shades of brown or gray

Texture—sand or loamy sand

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8

Redoximorphic features—few to many in shades of red, brown, yellow, or gray

Texture—sandy clay loam or sandy clay

*Btg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Redoximorphic features—few to many in shades of red, brown, yellow, or gray

Texture—sandy clay loam or sandy clay

## **Oktibbeha Series**

*Drainage class:* Moderately well drained

*Permeability:* Very slow

*Parent material:* Clayey sediments overlying calcareous clays

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Marine terraces

*Landform position:* Ridges and hillslopes

*Slope:* 2 to 8 percent

*Taxonomic classification:* Very-fine, smectitic, thermic Chromic Dystruderts

The Oktibbeha soils are commonly associated on the landscape with Hannon and Searcy soils. The Hannon soils are in positions similar to those of the Oktibbeha soils but have less clay in the control section and have masses of calcium carbonate within a depth of 30 inches. The Searcy soils are in positions similar to those of the Oktibbeha soils but are at lower elevations, are fine textured, and do not have vertic properties.

### **Typical Pedon**

Oktibbeha clay, in an area of Searcy-Oktibbeha complex, 2 to 5 percent slopes; in Washington County, Florida; USGS Wausau NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 42 minutes 23.79 seconds N. and long. 85 degrees 35 minutes 35.05 seconds W.

Ap—0 to 4 inches; brown (7.5YR 4/4) clay; moderate fine and medium subangular blocky structure; firm; few very fine and common fine roots; neutral; abrupt smooth boundary.

- Bt—4 to 12 inches; yellowish red (5YR 4/6) clay; moderate medium subangular blocky structure; firm; few very fine and fine roots; slightly acid; clear smooth boundary.
- Bss1—12 to 20 inches; yellowish red (5YR 4/6) clay; weak coarse subangular blocky structure parting to moderate medium subangular and angular blocky; firm; few fine roots; common large intersecting slickensides having polished and grooved surfaces; common medium distinct olive (5Y 5/3) iron depletions on faces of peds and in the matrix; slightly acid; abrupt smooth boundary.
- Bss2—20 to 30 inches; yellowish brown (10YR 5/6) clay; weak coarse subangular blocky structure parting to moderate medium subangular and angular blocky; firm; few fine roots; common large intersecting slickensides having polished and grooved surfaces; few fine distinct light brownish gray (10YR 6/2) iron depletions on faces of peds and within the matrix; slightly acid; abrupt smooth boundary.
- Bkss1—30 to 45 inches; dark yellowish brown (10YR 4/4) clay; moderate very coarse angular blocky structure parting to strong medium angular blocky; firm; common large intersecting slickensides that have prominent polished and grooved surfaces; common fine and medium prominent white (5Y 8/1) concretions of calcium carbonate; common soft white masses of calcium carbonate; few fine distinct light brownish gray (10YR 6/2) iron depletions in the matrix; strongly effervescent; slightly alkaline; gradual wavy boundary.
- Bkss2—45 to 80 inches; pale brown (10YR 6/3) silty clay; moderate medium angular blocky structure; firm; common large intersecting slickensides that have prominent polished and grooved surfaces; common fine and medium prominent white (5Y 8/1) concretions of calcium carbonate; common medium prominent yellowish red (5YR 4/6) and strong brown (7.5YR 5/6) masses of iron accumulation; few fine distinct light brownish gray (10YR 6/2) iron depletions; strongly effervescent; slightly alkaline.

### ***Range in Characteristics***

*Depth to secondary carbonates:* 30 to 50 inches

*Reaction:* Extremely acid to strongly acid in the A and Bt horizons, extremely acid to slightly acid in the Bss horizon, and slightly alkaline or moderately alkaline in the Bkss and 2C horizons, except where lime has been applied

*A or Ap horizon:*

Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4  
Texture—clay

*Bt horizon:*

Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8  
Texture—clay  
Redoximorphic features (where present)—few or common iron accumulations in shades of brown and red and iron or clay depletions in shades of gray

*Bss horizon (upper part):*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or no dominant color and multicolored in shades of brown, red, and gray  
Texture—clay  
Redoximorphic features—few to many iron accumulations in shades of brown and red and iron or clay depletions in shades of gray or olive

*Bss horizon (lower part):*

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6; or no dominant color and multicolored in shades of brown, red, and gray  
Texture—clay  
Redoximorphic features—few to many iron accumulations in shades of brown and red and iron or clay depletions in shades of gray

*Bkss horizon:*

- Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 4 to 8; or no dominant color and multicolored in shades of olive brown and gray
- Texture—clay or silty clay
- Redoximorphic features—few to many iron accumulations in shades of brown and olive and iron or clay depletions in shades of gray
- Masses of calcium carbonate—common or many
- Concretions of calcium carbonate—few to many

## **Orangeburg Series**

*Drainage class:* Well drained

*Permeability:* Moderate

*Parent material:* Loamy and clayey marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Interfluves and hillslopes

*Landform position:* Broad ridges; side slopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Fine-loamy, kaolinitic, thermic Typic Kandiodults

The Orangeburg soils are commonly associated on the landscape with Bonneau, Cowarts, Faceville, Lucy, Nankin, Rains, and Troup soils. The Bonneau and Lucy soils are in positions similar to those of the Orangeburg soils but have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches. The Cowarts soils have a brownish kandic horizon and are on side slopes adjacent to the Orangeburg soils. The Faceville and Nankin soils are in positions similar to those of the Orangeburg soils or slightly higher and have a fine textured control section. The Troup soils are in the slightly higher positions, are somewhat excessively drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches. The Rains soils are in the lower positions and are poorly drained.

### ***Typical Pedon***

Orangeburg loamy sand, 2 to 5 percent slopes (fig. 17); in Washington County, Florida; USGS Cottondale West SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 46 minutes 16.08 seconds N. and long. 85 degrees 28 minutes 23.26 seconds W.

- Ap—0 to 5 inches; dark brown (10YR 3/3) loamy sand; weak fine granular structure; very friable; many fine and medium roots; slightly acid; abrupt smooth boundary.
- BA—5 to 10 inches; strong brown (7.5YR 5/6) sandy loam; weak fine subangular blocky structure; friable; many fine and medium roots; sand grains coated and bridged with clay; strongly acid; clear smooth boundary.
- Bt1—10 to 20 inches; red (2.5YR 4/8) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.
- Bt2—20 to 75 inches; red (2.5YR 4/8) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; few fine prominent olive yellow (2.5Y 6/6) masses of relic iron accumulation; strongly acid; clear smooth boundary.
- Bt3—75 to 80 inches; red (2.5YR 4/8) sandy clay; strong medium subangular blocky structure; firm; few faint clay films on faces of peds; strongly acid.

### ***Range in Characteristics***

*Thickness of the solum:* More than 70 inches

*Reaction:* Very strongly acid to moderately acid in the upper part of the solum and very strongly acid or strongly acid in the lower part, except where lime has been applied



Figure 17.—Profile of Orangeburg loamy sand. This soil formed in iron enriched, loamy and clayey marine sediments. The orange horizon at a depth of 8 inches is an argillic horizon. The scale is in inches.

*A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4  
Texture—loamy sand

*E horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 6  
Texture—loamy sand

*Bt horizon:*

- Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
- Redoximorphic features (where present)—few or common iron accumulations in shades of brown in the part of the lower horizon
- Texture—dominantly sandy clay loam; sandy clay in lower part of the horizon in some pedons

## **Pamlico Series**

*Drainage class:* Very poorly drained

*Permeability:* Moderate in the organic layers and rapid to slow in the mineral layers

*Parent material:* Highly decomposed organic material underlain by dominantly sandy sediments

*Landscape:* Lower Coastal Plain

*Landform:* Depressions on flood plains

*Slope:* 0 to 1 percent

*Taxonomic classification:* Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists

The Pamlico soils are commonly associated on the landscape with Dorovan, Pickney, and Rutlege soils. These associated soils are in positions similar to those of the Pamlico soils. The Dorovan soils have organic layers with a combined thickness of more than 51 inches. The Pickney and Rutlege soils are mineral soils.

### ***Typical Pedon***

Pamlico muck, in an area of Rutlege, Pickney, and Pamlico soils, frequently flooded; in Washington County, Florida; USGS Millers Ferry SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 33 minutes 24.66 seconds N. and long. 85 degrees 52 minutes 5.57 seconds W.

Oa1—0 to 20 inches; very dark gray (10YR 3/1) muck; 20 percent fiber unrubbed and 2 percent rubbed; massive; slightly sticky; few fine roots; extremely acid; gradual wavy boundary.

Oa2—20 to 40 inches; very dark grayish brown (10YR 3/2) muck; 15 percent fiber unrubbed and less than 1 percent rubbed; massive; slightly sticky; extremely acid; gradual wavy boundary.

Cg—40 to 80 inches; gray (10YR 6/1) sand; single grain; loose; few lenses of very dark brown (10YR 2/2) loamy sand; very strongly acid.

### ***Range in Characteristics***

*Depth to sand:* 16 to 51 inches

*Reaction:* Extremely acid (by the method of 0.01 calcium chloride) in the organic layers and extremely acid to strongly acid in the underlying mineral layers

*Oi or Oe horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2

Texture—mucky peat; 50 to 90 percent fiber unrubbed and 25 to 60 percent rubbed

*Oa horizon:*

Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2

Texture—muck; 10 to 30 percent fiber unrubbed and less than 10 percent rubbed

*Cg horizon:*

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

Texture—sand, fine sand, loamy fine sand, or loamy sand

## **Pantego Series**

*Drainage class:* Very poorly drained

*Permeability:* Moderate

*Parent material:* Loamy marine sediments

*Landscape:* Lower Coastal Plain

*Landform:* Depressions

*Slope:* 0 to 1 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Umbric  
Paleaquults

The Pantego soils are commonly associated on the landscape with Bayboro, Bladen, Dunbar, Lynchburg, Pamlico, and Surrency soils. The very poorly drained Bayboro and Surrency soils are in landscape positions similar to those of the Pantego soils. The Bayboro soils are more than 35 percent clay. The Surrency soils have a Bt horizon at a depth of 20 to 40 inches. The poorly drained Bladen soils are in the slightly higher positions and have a clayey subsoil. The Pamlico soils have more than 16 inches of organic material. The Dunbar and Lynchburg soils are somewhat poorly drained.

### ***Typical Pedon***

Pantego sandy loam, in an area of Pantego and Clara soils, ponded; in Bay County, Florida; USGS Panama City NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 13 minutes 1.79 seconds N. and long. 85 degrees 40 minutes 23.25 seconds W.

A—0 to 18 inches; very dark gray (10YR 3/1) sandy loam; weak fine granular structure; very friable; many fine and medium roots; high content of organic matter; very strongly acid; clear smooth boundary.

Btg1—18 to 32 inches; dark gray (10YR 4/1) sandy clay loam; weak fine subangular blocky structure; friable; common fine and medium roots; very strongly acid; gradual wavy boundary.

Btg2—32 to 80 inches; gray (10YR 6/1) sandy clay loam; weak fine subangular blocky structure; friable; common medium prominent brownish yellow (10YR 6/6), yellowish brown (10YR 5/6), strong brown (7.5YR 5/6), and pale brown (10YR 6/3) masses of iron accumulation; very strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Extremely acid to strongly acid throughout

#### *A horizon:*

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

Texture—sandy loam, loamy fine sand, fine sandy loam, loamy sand, or the mucky analogs of these textures

#### *Btg horizon:*

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

Texture—sandy clay loam, sandy loam, sandy clay, or clay loam

Redoximorphic features—few to many iron accumulations in shades of brown, red, or yellow

#### *Cg horizon (where present):*

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

Texture—sandy loam, sandy clay loam, sandy clay, or clay loam

Redoximorphic features—few to many iron accumulations in shades of brown or yellow

## Pickney Series

*Drainage class:* Very poorly drained

*Permeability:* Rapid

*Parent material:* Sandy marine or alluvial sediments

*Landscape:* Lower Coastal Plain

*Landform:* Flood plains

*Slope:* 0 to 2 percent

*Taxonomic classification:* Sandy, siliceous, thermic Cumulic Humaquepts

The Pickney soils are commonly associated on the landscape with Dorovan, Pamlico, and Rutlege soils. These associated soils are in positions similar to those of the Pickney soils. The Dorovan soils have organic layers with a combined thickness of more than 51 inches. The Pamlico soils have mineral layers at a depth of less than 51 inches. The Rutlege soils are mineral soils that have a loamy surface layer with a high content of organic matter.

### Typical Pedon

Pickney loamy sand, in an area of Rutlege, Pickney, and Pamlico soils, frequently flooded; in Washington County, Florida; USGS Compass Lake NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 34 minutes 3.69 seconds N. and long. 85 degrees 26 minutes 11.03 seconds W.

A1—0 to 10 inches; black (10YR 2/1) loamy sand; weak fine granular structure; friable; common fine roots; extremely acid; gradual wavy boundary.

A2—10 to 20 inches; black (10YR 2/1) sand; weak fine granular structure; very friable; common clean sand grains; extremely acid; gradual wavy boundary.

Cg1—20 to 30 inches; very dark grayish brown (10YR 3/2) sand; single grain; loose; common clean sand grains; very strongly acid; gradual wavy boundary.

Cg2—30 to 40 inches; grayish brown (10YR 5/2) sand; single grain; loose; strongly acid; gradual wavy boundary.

Cg3—40 to 80 inches; gray (10YR 6/1) sand; single grain; loose; strongly acid.

### Range in Characteristics

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to moderately acid throughout

*A horizon:*

Color—hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2; or neutral in hue and value of 2 or 3

Texture—loamy sandy, sand, loamy fine sand, or the mucky analogs of these textures

*Cg horizon:*

Color—hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 or 2; or neutral in hue and value of 3 to 6

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

Redoximorphic features (where present)—few to many iron accumulations in shades of brown or yellow

## Plummer Series

*Drainage class:* Poorly drained and very poorly drained

*Permeability:* Moderate

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Flats and depressions

## Soil Survey of Washington County, Florida

*Slope:* 0 to 2 percent

*Taxonomic classification:* Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

The Plummer soils are commonly associated on the landscape with Albany, Chipley, Clara, Ocilla, Osier, and Pottsburg soils. The Albany and Ocilla soils are in the slightly higher positions and are somewhat poorly drained. Also, the Albany soils have an argillic horizon at a depth of 40 to 80 inches and are somewhat poorly drained. The Chipley and Pottsburg soils are sandy to a depth of at least 80 inches. Also, the Chipley soils are somewhat poorly drained and the Pottsburg soils have a spodic horizon. The Osier soils are in the slightly lower landscape positions. The Clara soils do not have an argillic horizon.

### **Typical Pedon**

Plummer sand, in an area of Clara and Plummer soils, occasionally ponded; in Washington County, Florida; USGS Gap Lake SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 30 minutes 26.9 seconds N. and long. 85 degrees 35 minutes 20.2 seconds W.

Ap—0 to 3 inches; dark gray (2.5Y 4/1) sand; weak fine granular structure; very friable; very strongly acid; abrupt wavy boundary.

Eg1—3 to 12 inches; grayish brown (2.5Y 5/2) sand; single grain; loose; very strongly acid; gradual wavy boundary.

Eg2—12 to 47 inches; light brownish gray (10YR 6/2) sand; single grain; loose; very strongly acid; clear wavy boundary.

Btg1—47 to 59 inches; light gray (2.5Y 7/1) sandy loam; weak medium granular structure; friable; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2—59 to 80 inches; light gray (2.5Y 7/1) sandy clay loam; weak medium subangular blocky structure; friable; strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* 40 to 80 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*Ap or A horizon:*

Color—hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2

Texture—sand

*Eg horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2

Texture—sand, fine sand, loamy sand, or loamy fine sand

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

*Btg horizon:*

Color—hue of 10YR or 2.5Y, 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 sandy clay loam

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

## **Pottsburg Series**

*Drainage class:* Poorly drained

*Permeability:* Moderate

*Parent material:* Sandy marine sediments

*Landscape:* Lower Coastal Plain

*Landform:* Flats

*Slope:* 0 to 2 percent

*Taxonomic classification:* Sandy, siliceous, thermic Grossarenic Alaquods

The Pottsburg soils are commonly associated on the landscape with Chipley, Hurricane, Leon, and Osier soils. The Chipley and Hurricane soils are in the slightly higher positions and are somewhat poorly drained. Also, the Chipley soils do not have a Bh horizon. The Leon and Osier soils are in positions similar to those of the Pottsburg soils. The Leon soils have a Bh horizon at a depth of 20 to 30 inches. The Osier soils do not have a Bh horizon.

### **Typical Pedon**

Pottsburg sand, occasionally flooded; in Bay County, Florida; USGS Allanton NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 4 minutes 57.57 seconds N. and long. 85 degrees 24 minutes 35.45 seconds W.

A1—0 to 5 inches; dark gray (10YR 4/1) sand; single grain; loose; many fine and medium roots; very friable; strongly acid; clear smooth boundary.

A2—5 to 12 inches; grayish brown (10YR 5/2) sand; single grain; loose; many fine and medium roots; very strongly acid; gradual wavy boundary.

E1—12 to 30 inches; light brownish gray (10YR 6/2) sand; single grain; loose; few fine and medium roots; very strongly acid; gradual wavy boundary.

E2—30 to 60 inches; light gray (10YR 7/1) sand; single grain; loose; very strongly acid; clear smooth boundary.

Bh1—60 to 64 inches; brown (10YR 5/3) sand; single grain; loose; about 30 to 40 percent of sand grains coated with organic matter; very strongly acid; clear smooth boundary.

Bh2—64 to 80 inches; very dark gray (10YR 3/1) sand; single grain; loose; sand grains coated with organic matter; very strongly acid.

### **Range in Characteristics**

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

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

Texture—sand

*E horizon (upper part):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 3

Texture—sand or fine sand

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

*E horizon (lower part):*

Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 or 2

Texture—sand or fine sand

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

*Bh horizon:*

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

Texture—sand or fine sand

## Rains Series

*Drainage class:* Poorly drained

*Permeability:* Moderate

*Parent material:* Sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Flats and depressions

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults

The Rains soils are commonly associated on the landscape with Bladen, Grady, Lynchburg, Ocilla, Pelham, and Plummer soils. The poorly drained Bladen, Pelham, and Plummer soils are in landscape positions similar to those of the Rains soils. The Bladen soils have more than 35 percent clay in the Bt horizon. The Pelham soils have an argillic horizon within a depth of 20 to 40 inches. The Plummer soils are poorly drained. The Grady soils have a clayey particle-size control section. The Lynchburg soils are in the higher positions and are somewhat poorly drained. The Ocilla soils are in the slightly higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are somewhat poorly drained.

### Typical Pedon

Rains loamy sand, in an area of Rains and Bayboro soils, depressional; in Washington County, Florida; USGS Chipley NE, Florida, 7.5-minute quadrangle; lat. 30 degrees 49 minutes 33.93 seconds N. and long. 85 degrees 32 minutes 8.1 seconds W.

A—0 to 5 inches; dark grayish brown (2.5Y 4/2) loamy sand; weak fine granular structure; very friable; strongly acid; clear wavy boundary.

Eg—5 to 15 inches; light yellowish brown (2.5Y 6/2) sandy loam; weak fine granular structure; very friable; few fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btg1—15 to 30 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; friable; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2—30 to 55 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; common medium distinct yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.

BCg—55 to 80 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium prominent yellowish brown (10YR 5/8) and yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid.

### Range in Characteristics

*Thickness of sandy material:* Less than 20 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2

Texture—loamy sand

*Eg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

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

## Soil Survey of Washington County, Florida

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

### *Btg horizon:*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy clay loam or clay loam

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

### *BCg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

Texture—sandy clay loam or sandy clay

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

### *Cg horizon (where present):*

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

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

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

## **Rutlege Series**

*Drainage class:* Very poorly drained

*Permeability:* Rapid

*Parent material:* Sandy marine or alluvial sediments

*Landscape:* Lower and middle Coastal Plain

*Landform:* Flood plains, flats, and depressions

*Slope:* 0 to 2 percent

*Taxonomic classification:* Sandy, siliceous, thermic Typic Humaquepts

The Rutlege soils are commonly associated on the landscape with Leon, Pamlico, Pickney, Plummer, and Pottsburg soils. These associated soils are in the slightly higher positions and are poorly drained. The Leon soils have a spodic horizon. The Pamlico soils have more than 16 inches of organic material. The very poorly drained Pickney soils are in positions similar to those of the Rutlege soils but have an umbric epipedon. The Plummer soils have an argillic horizon and do not have an umbric horizon. The Pottsburg soils are in the lower positions and have a Bh horizon below a depth of 50 inches.

### ***Typical Pedon***

Rutlege loamy sand, in an area of Rutlege, Pickney and Pamlico soils, frequently flooded; in Washington County, Florida; USGS Gap Lake NE, Florida, 7.5-minute quadrangle; lat 30 degrees 36 minutes 42.12 seconds N. and long. 85 degrees 30 minutes 48.14 seconds W.

A1—0 to 5 inches; black (10YR 2/1) loamy sand; weak fine granular structure; very friable; few fine roots; very strongly acid; gradual smooth boundary.

A2—5 to 10 inches; very dark grayish brown (10YR 3/2) loamy sand; single grain; loose; very strongly acid; gradual wavy boundary.

Cg1—10 to 20 inches; light gray (2.5Y 7/2) sand; single grain; loose; very strongly acid; gradual wavy boundary.

Cg2—20 to 60 inches; light gray (10YR 7/2) sand; single grain; loose; very strongly acid; gradual wavy boundary.

Cg3—60 to 80 inches; light gray (10YR 7/1) sand; single grain; loose; very strongly acid.

### ***Range in Characteristics***

*Thickness of sandy material:* More than 80 inches

*Reaction:* Extremely acid to strongly acid throughout, except where lime has been applied

*A horizon:*

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

Texture—loamy sand or sand

*Cg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

Texture—sand, fine sand, loamy fine sand, or loamy sand

Redoximorphic features (where present)—few to many iron accumulations in shades of brown or yellow

## **Searcy Series**

*Drainage class:* Moderately well drained

*Permeability:* Very slow

*Parent material:* Clayey marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Uplands

*Landform position:* Ridges and side slopes

*Slope:* 2 to 5 percent

*Taxonomic classification:* Fine, mixed, active, thermic Aquic Paleudalfs

The Searcy soils are commonly associated on the landscape with Hannon and Oktibbeha soils. These associated soils are in positions similar to those of the Searcy soils but are at higher elevations, are clayey to the surface, and have vertic properties.

### ***Typical Pedon***

Searcy sandy loam, in an area of Searcy-Oktibbeha complex, 2 to 5 percent slopes; in Washington County, Florida; USGS Wausau NW, Florida, 7.5-minute quadrangle; lat. 30 degrees 42 minutes 23.28 seconds N. and long. 85 degrees 35 minutes 37.71 seconds W.

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

Bt1—2 to 5 inches; brown (7.5YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; many fine and few medium roots; strongly acid; clear wavy boundary.

Bt2—5 to 35 inches; yellowish red (5YR 5/8) clay; moderate medium subangular blocky structure; firm; common fine roots; common distinct clay films on faces of peds; strongly acid; clear wavy boundary.

Bt3—35 to 50 inches; red (2.5YR 5/8) clay; moderate medium subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; common medium prominent light gray (10YR 7/2) iron depletions; very strongly acid; clear wavy boundary.

2Bt4—50 to 80 inches; 40 percent red (2.5YR 5/8), 30 percent yellowish brown (10YR 5/8), and 30 percent light gray (10YR 7/1) clay; moderate medium subangular

## Soil Survey of Washington County, Florida

blocky structure parting to moderate fine angular blocky; firm; common faint clay films on faces of peds; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 60 inches or more

*Reaction:* Very strongly acid or strongly acid, except where lime has been applied

*A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 to 4

Texture—sandy loam

*E horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 or 4

Texture—sandy clay loam

*Bt horizon:*

Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8

Texture—clay; a thin layer of sandy clay loam in the upper part in some pedons

Redoximorphic features (where present)—few or common accumulations in shades of brown, yellow, and red and few or common depletions in shades of gray

*2Bt horizon (where present):*

Color—no dominant matrix color; multicolored in shades of brown, yellow, gray, and red

Texture—clay, sandy clay, or silty clay

Redoximorphic features (relict, where present)—few or common accumulations in shades of brown, yellow, and red and few or common depletions in shades of gray

## **Troup Series**

*Drainage class:* Somewhat excessively drained

*Permeability:* Moderate

*Parent material:* Unconsolidated sandy and loamy marine sediments

*Landscape:* Upper, middle, and lower Coastal Plain

*Landform:* Hills, ridges, and hillslopes

*Slope:* 0 to 8 percent

*Taxonomic classification:* Loamy, kaolinitic, thermic Grossarenic Kandiodults

The Troup soils are commonly associated on the landscape with Lakeland, Lucy, and Orangeburg soils. The Lakeland soils are in the slightly higher positions, do not have a Bt horizon, are sandy throughout the profile, and are excessively drained. The Lucy soils have a loamy subsoil at a depth of 20 to 40 inches, have less than 5 percent plinthite in the subsoil, and are well drained. The Orangeburg soils have a loamy subsoil within a depth of 20 inches, are well drained, and contain 0 to 10 percent iron nodules in the subsoil.

### **Typical Pedon**

Troup sand, in an area of Troup-Lucy complex, 5 to 8 percent slopes; in Washington County, Florida; USGS Alford SW, Florida, 7.5-minute quadrangle; lat. 30 degrees 39 minutes 32.22 seconds N. and long. 85 degrees 29 minutes 47.27 seconds W.

Ap—0 to 10 inches; brown (10YR 4/3) sand; weak fine granular structure; very friable; strongly acid; abrupt smooth boundary.

E1—10 to 40 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose; strongly acid; gradual wavy boundary.

Soil Survey of Washington County, Florida

E2—40 to 55 inches; pale brown (10YR 6/3) sand; single grain; loose; strongly acid; gradual wavy boundary.

Bt—55 to 80 inches; yellowish red (5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; strongly acid.

***Range in Characteristics***

*Thickness of sandy material:* 40 to 80 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A or Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 2 to 4

Texture—sand

*E horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 3 to 8; few or common clean grains in some pedons

Texture—sand, fine sand, or loamy sand

*Bt horizon:*

Color—dominantly hue of 2.5YR or 5YR, value of 5 to 7, and chroma of 4 to 8; hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8 in some pedons

Texture—sandy clay loam, sandy loam, or fine sandy loam



# Formation of the Soils

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In this section, the factors and processes of soil formation are described and related to the soils in the survey area. Also, the geology of the county is described.

## Factors of Soil Formation

Soil is produced by forces of weathering acting on parent material deposited or accumulated by geologic agencies. The kind of soil that develops depends on five major factors. These factors are the type of parent material; the climate under which soil material has existed since accumulation; the plant and animal life in and on the soil; the relief, or lay of the land; and the length of time the forces of soil formation have acted on the soil material (Jenny, 1941).

The five soil-forming factors are interdependent; each modifies the effects of the others. As a soil forms, it is influenced by each of the five factors, but in places one factor may be dominant and account for most of the soil's properties. For example, if the parent material is quartz sand, the soil generally has weakly expressed horizons. In places, the effect of the parent material is modified greatly by the effects of climate, relief, and plants and animals. A modification or variation in any of the five factors results in a different kind of soil.

## Parent Material

Parent material is the unconsolidated mass in which a soil forms. It determines the limits of the chemical and mineralogical composition of the soil. In Washington County, the parent material consists of beds of sandy and clayey materials that were transported and deposited by ocean currents. The ocean covered the area a number of times during the Pleistocene period. In some parts of the county, depressions contain organic material from decomposed plant remains.

## Climate

The climate of Washington County is generally warm and humid. Few differences between the soils are caused by climate. The climate is favorable for the rapid decomposition of organic matter and hastens chemical reactions in the soil. Heavy rainfall leaches the soils of most plant nutrients and produces an acid condition in many of the sandy soils. It also carries the less soluble fine particles downward. Because of the climatic conditions, many of the soils in the county have a low content of organic matter, low natural fertility, and low available water capacity.

## Plants and Animals

Plants have been the principal biological factor in the formation of soils in the county. Animals, insects, bacteria, and fungi have also been important. Plants and animals furnish organic matter to the soil and bring nutrients from lower soil layers to upper soil layers. In places, plants and animals cause differences in the amount of organic matter, nitrogen, and nutrients in the soil and differences in soil porosity

and structure. For example, crayfish penetrate different layers of soil, thereby mixing loamy layers with sandy layers. Microorganisms, including bacteria and fungi, help to weather and break down minerals and to decompose organic matter. These organisms are most numerous in the upper few inches of the soil. Earthworms and other small animals that inhabit the soil alter its physical and chemical composition and mix the soil material.

## Relief

In Washington County, relief has affected the formation of soils primarily through its influence on soil-water relationships. The three general areas of relief in the county are flatwoods; elevated rises, knolls, ridges, and hills; and depressions and flood plains. Differences between the soils, which all formed in similar parent materials, are directly related to relief. In areas of the flatwoods, the water table is at a shallow depth and the soils are periodically saturated to the surface. The soils in these areas display less leaching and greater retention of organic matter than the soils in the other areas. The soils on the elevated knolls and ridges have a greater depth to the water table. They are highly leached and have less organic matter. The soils in depressions have a medium to very high content of organic matter.

## Time

Time is an important factor affecting soil formation. The physical and chemical changes brought about by climate, living organisms, and relief are relatively slow. The length of time needed to convert geological material into soil varies according to the nature of the material and the interaction of the other soil-forming factors. Some basic minerals from which soils are formed weather fairly rapidly; others are chemically inert and show little change over time. Within the soil, the translocation of fine particles to form horizons varies under differing conditions, but the processes take a relatively long period of time.

## Processes of Soil Formation

Soil genesis refers to the formation of soil horizons. The differentiation of soil horizons in Washington County is the result of accumulation of organic matter, leaching of carbonates, reduction and transfer of iron, and accumulation of silicate clay minerals. In places, more than one of these processes are involved. Some organic matter has accumulated in the upper layers of most of the soils. The content of organic matter is low in some of the soils and fairly high in others.

The soils in the county are leached to varying degrees. Carbonates and salts have been leached in most of the soils. Because the leaching permitted the subsequent translocation of silicate clay materials in some soils, the effects have been indirect. The reduction and transfer of iron have occurred in most of the soils in the county, except the organic soils. In some of the wet soils, iron in the subsoil forms yellowish brown horizons and redoximorphic features (mottles).

## Geology

Frank R. Rupert and Guy H. Means, professional geologists, Florida Geological Survey, prepared this section.

The following overview of the geology of Washington County, Florida, includes sections on: *geomorphology*, describing the shape and origin of the land surface; *stratigraphy*, describing the underlying rock strata; *ground water*, providing an overview of the aquifer systems; and *mineral resources*, discussing near-surface mineral commodities and potential petroleum resources.

## Geomorphology

The modern land surface of Washington County is a product of prehistoric fluvial and marine deposition during periods when sea level was higher than present. Subsequent erosion by marine currents and waves, as well as later down-cutting by freshwater streams, superimposed both relict marine features, in the form of terraces, and incised stream valleys and ravines on the older sediments. Rainwater runoff draining into adjacent stream valleys gradually shaped the highlands into the rolling hills that characterize much of the county today. Additionally, dissolution of shallow underlying carbonate rock units resulted in the formation of sinkholes, caves, and underground drainage systems. Washington County may be subdivided into a series of geomorphic provinces based on the elevation and shape of the land surface. Figure 18 is a geomorphic map of Washington County.

Scott and Paul (in preparation) recognize three broad geomorphic districts within Washington County: the Southern Pine Hills District, the Dougherty Karst Plain District, and the Apalachicola Delta District. These three regions are, in turn, comprised of seven smaller geomorphic provinces.

### Southern Pine Hills District

The Southern Pine Hills District is a broad, southward-sloping, stream-dissected plain extending southward out of Alabama to the Gulf of Mexico (Scott and Paul, in preparation). It spans the Florida panhandle from the Alabama border to westernmost Washington County. The district is developed on Miocene estuarine sediments, Pliocene Citronelle Formation siliciclastics, and younger marine and fluvial sediments. In Washington County, the district is comprised of the Western Highlands and the Gulf Coastal Lowlands geomorphic provinces.

**Western Highlands.**—This province consists of a series of rolling, stream-dissected hills formed primarily on the Citronelle Formation siliciclastic sediments. The province extends a short distance into western Washington County across the Choctawhatchee River valley (fig. 18). The rolling topography of the highlands is the result of stream erosion of an extensive Pliocene river delta thought to have extended over much of the Florida panhandle. The Western Highlands are separated from the Gulf Coastal Lowlands to the south by an indistinct marine scarp and are bordered on the east by the De Funiak-Bonifay Karst Hills and the Vernon Karst Hills. Elevations of the Western Highlands within Washington County typically range from 25 to 40 feet above mean sea level (MSL).

**Gulf Coastal Lowlands.**—This province fringes the shoreline of the Gulf of Mexico from the Alabama-Florida State line eastward into Bay County. The province forms a flat to gently rolling band between the coastline and the Western Highlands to the north. The transition from the Western Highlands, which have a higher elevation, to the lowlands is commonly marked by an indistinct marine escarpment with a base at approximately 25 feet above MSL. The lowlands occupy the extreme southwestern tip of Washington County. Elevations within the coastal lowlands in the county range from about 20 to 25 feet above MSL. Undifferentiated Pleistocene and Holocene siliciclastic sediments and alluvium, possibly including reworked Citronelle Formation material, underlie the Gulf Coastal Lowlands in the county (Scott and Paul, in preparation).

### Dougherty Karst Plain District

The Dougherty Karst Plain District occupies a portion of the central Florida panhandle, including most of Washington County. The district is comprised of a flat to gently rolling, southwestward sloping plain generally characterized by karst terrain. Karst terrain in Florida is underlain by soluble limestone and dolostone and commonly contains solution landforms, such as sinkholes, closed depressions, subterranean drainage systems, and caves, dissolved in the bedrock by slightly acidic ground water.

## Soil Survey of Washington County, Florida

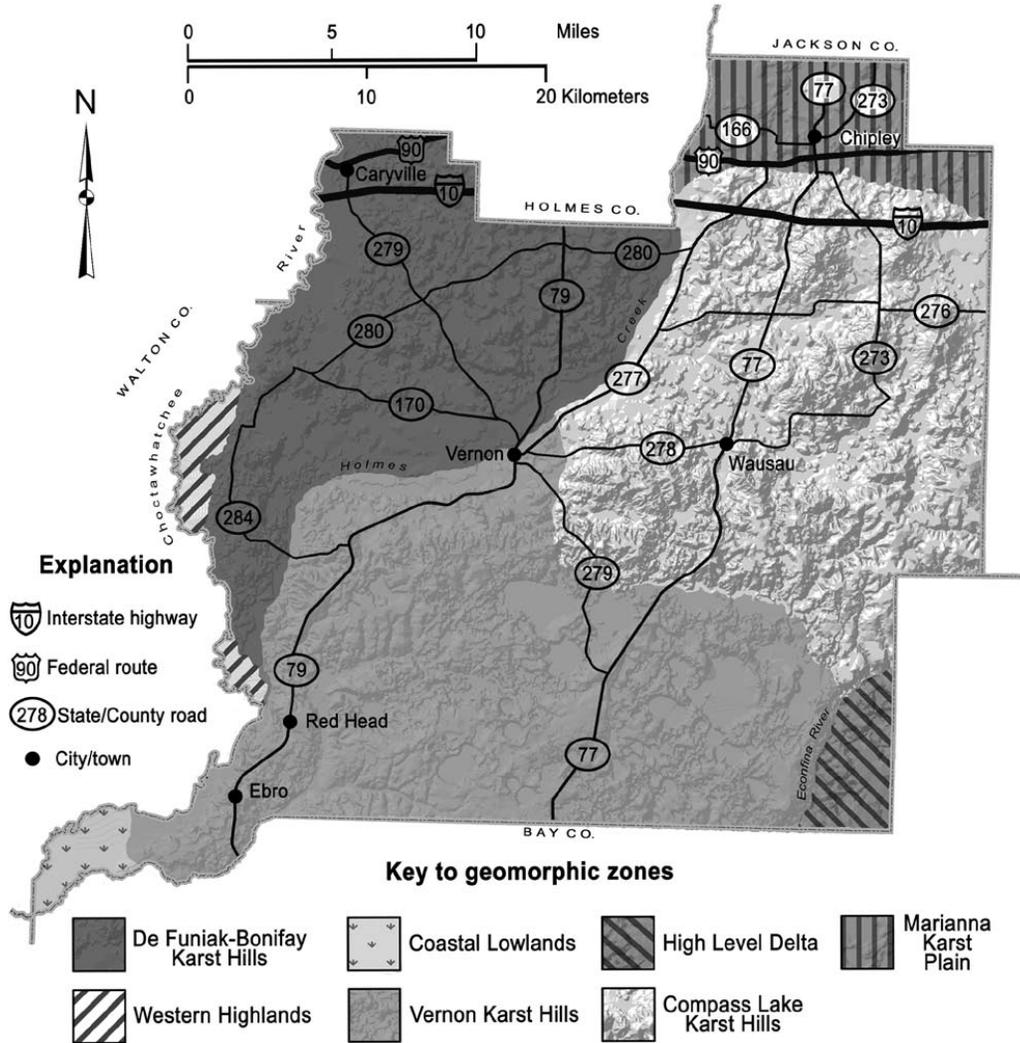


Figure 18.—Geomorphic map of Washington County (from Scott and Paul, in preparation).

A local structural feature named the “Chattahoochee anticline” forms a structurally stable high point in the subsurface to the northeast of Washington County. Soluble Eocene to Miocene carbonates are near or at the surface over this feature and dip away to the southwest off its flank. As a result, this feature has had a significant influence on the development of karst landscape in Washington County.

The four geomorphic provinces of this district are all present in Washington County: the De Funiak Springs-Bonifay Karst Hills, the Marianna Karst Plain, the Compass Lake Karst Hills, and the Vernon Karst Hills. All of these provinces have been shaped by dissolution of the underlying carbonate bedrock and erosion by surface streams. Each is designated primarily by differing characteristics of the karstic landscape.

**De Funiak Springs-Bonifay Karst Hills.**—This province occupies the northwestern portion of Washington County. The landscape is comprised of hilly terrain similar to that of the Southern Pine Hills, but it contains sinkholes and other solution features that generally increase in number eastward in the province. Miocene and Pliocene siliciclastic sediments overlie soluble carbonate bedrock throughout the karst hills. Elevations range from about 25 feet above MSL at the southernmost end of the province to nearly 150 feet above MSL on the higher hilltops in the northern portion of

the province. The southern and eastern boundaries of the province are delineated by the valley of Holmes Creek.

**Marianna Karst Plain.**—This province occurs in the northeastern-most part of Washington County, from where it extends northward into adjacent Jackson County. The land surface is gently rolling to relatively flat and has numerous shallow sinkholes and caves. The province reflects the shoaling of soluble carbonate rocks over the southern flank of the Chattahoochee anticline. It has been heavily influenced by fluvial erosion and dissolution in the underlying carbonate bedrock. Elevations in the Marianna Karst Plain in Washington County typically range from about 60 feet above MSL in the west and north to nearly 170 feet above MSL on the higher hilltops in the east. Eocene, Oligocene, and Miocene carbonates are at or near the surface throughout the province. The province is bounded on the south by the Compass Lake Karst Hills.

**Compass Lake Karst Hills.**—This province occupies east-central Washington County, south of the Marianna Karst Plain. It comprises an area of rolling hills underlain by shallow carbonates mantled with siliciclastic sediments of the Alum Bluff Group and Citronelle Formation. The karst hills contain some the highest elevations in Washington County. Land surface elevations range from about 50 feet above MSL near Holmes Creek on the west to almost 300 feet above MSL near the eastern county line. The higher hilltops may, in part, reflect the pre-erosional elevation of the delta plain thought to have covered the area in the Pliocene. Karst features are present throughout the province but are less common in the western portion of the karst hills. The features become more common to the east and north toward the Marianna Karst Plain.

**Vernon Karst Hills.**—This province occupies a broad area of central and southern Washington County. The region is characterized by rolling hills that are commonly pocked with small sinkholes; interspersed flat, plain-like karst valleys; and a series of larger, well-defined sinkhole lakes in the southern portion. Elevations in this province range from about 20 feet above MSL in the southwestern part of the province to about 200 feet above MSL on the higher hills south of the town of Vernon.

Among the most notable features of the Vernon Karst Hills are the large sinkholes dotting the landscape in the southern part of the province. Some of the sinkholes contain large lakes. Several of the individual sinkhole lakes are nearly one-half mile in diameter. Some of the larger lakes that formed from coalesced sinks are a mile and a half across their longest dimension. The sinkholes in the Vernon Karst Hills are significantly deeper and steeper-sided than sinkholes in other parts of the county (Scott and Paul, in preparation). The underlying carbonate bedrock is covered by Alum Bluff Group siliciclastics and Citronelle Formation sediments, which commonly cap the hills in the region.

### **Apalachicola Delta District**

The Apalachicola Delta District comprises just the southeastern-most corner of Washington County (Scott and Paul, in preparation). The Econfinia River forms the boundary between this district and the adjacent Vernon and Compass Lake Karst Hills provinces on the west and northwest. In its full extent, the district extends from central Bay County and southeastern Washington County eastward to the western third of Wakulla County. The southern terminus of the district includes a barrier island complex along the Gulf Coast. Within Washington County, the district has one province, the High Level Deltas and River Terraces.

**High Level Deltas and River Terraces.**—In Washington County, this province is generally characterized by well drained, gently rolling topography. Deltaic Citronelle Formation sediments form the local hills. Elevations range from about 40 feet above MSL near the Econfinia River in the southern portion of the zone to about 155 feet above MSL on the higher hills along the eastern Washington-Bay County line.

## Marine Terraces

An integral part of the present-day geomorphology of Washington County is a series of relict marine terraces. These terraces are step-like surfaces of erosion and deposition representing prehistoric sea bottoms developed by advances and retreats of the sea since the Miocene Epoch. In many areas of Florida, they have been extensively modified by karst dissolution in the underlying carbonate bedrock as well as by fluvial erosion. Healy (1975) recognized six marine terraces based on elevation in Washington County. In order of descending elevation (and age), these shorelines are the Hazelhurst, the Coharie, the Sunderland-Okefenokee, the Wicomico, the Penholoway, and the Pamlico Terraces.

The Hazelhurst Terrace (Cooke, 1939) comprises the higher hilltops in the eastern and northeastern parts of the county. The lower limits of the Hazelhurst Terrace are at approximately 220 feet above MSL; the upper limits in Washington County are at approximately 300 feet above MSL. The Coharie Terrace comprises the area of the land surface delineated by the contour lines at 170 to 220 feet above MSL. This terrace occurs in small areas of the northeastern, east-central, and southeastern parts of the county. As used in this report, the Sunderland Terrace is between 100 and 170 feet above MSL. It occupies extensive areas of the northwestern, eastern, and southern sections of Washington County. The Wicomico Terrace is a narrow band bordering the northern and southern portions of the Holmes Creek valley and its major tributaries. Similarly, the Penholoway Terrace is in bands corresponding to 42 to 70 feet above MSL in the Holmes Creek and Choctawhatchee River valleys. The youngest terrace, the Pamlico, lies at elevations of approximately 8 to 25 feet above MSL. It occupies most of the southern part of the Choctawhatchee River valley (Healy, 1975).

## Stratigraphy

Washington County is underlain by a thick sequence of marine carbonates and siliciclastics. The oldest rocks in the county were penetrated by an exploratory oil well drilled to over 14,000 feet. These rocks typically consist of Upper Triassic (230 to 200 million years old), red, purple, and gray sandstones, siltstones, and shales (Applegate et al., 1978).

The oldest rocks at or near the land surface in Washington County belong to the Ocala Limestone of Upper Eocene age. These rocks are marine in origin and occur in the northwestern corner of the county along the Choctawhatchee River. The youngest rocks in the county are Holocene in age and consist of recently deposited sands and clays that are primarily in river flood plains. Most fresh water and mineral resources in Washington County are within rocks of the Eocene Epoch and younger, and the following discussion of stratigraphy is limited to these units. Figure 19 is a geologic map of the county and shows the distribution of mapped geologic units within 20 feet of the surface. Figures 20 and 21 are geologic cross sections through the county.

### Eocene Series

**Ocala Limestone.**—The Ocala Limestone (Dall and Harris, 1892) underlies the entire county. It consists of a cream to white, poorly indurated to moderately indurated limestone. In places, this formation is dolomitized, but it is primarily limestone comprised of marine macrofossils that include foraminifera, mollusks, and echinoids. Weathered portions of the unit may be silicified. The formation gently dips to the southwest and is at or near the surface in the northwest (Green et al., 2002) and possibly northeast (Vernon, 1942) corners of the county. The thickness of the Ocala Limestone ranges from 200 feet in the northwestern part of the county to 400 feet in the southwestern part (Miller, 1986). The Ocala Limestone is unconformably overlain by the Marianna Limestone or undifferentiated Bridgeboro/Marianna Limestones in the

## Soil Survey of Washington County, Florida

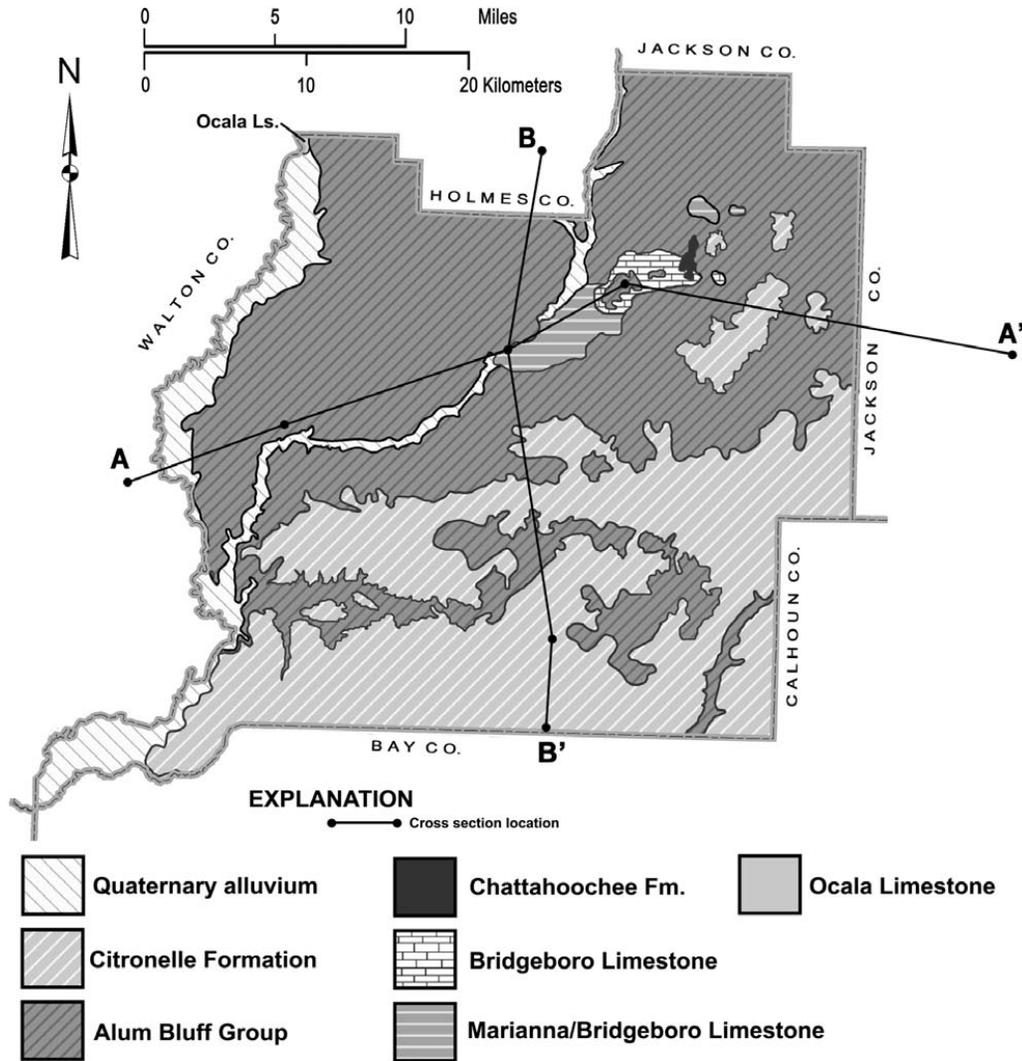


Figure 19.—Geologic map of Washington County (modified from Green et al., 2002, and Scott et al., 2001).

central and southern parts of Washington County. It is also unconformably overlain by Alum Bluff Group sediments in the northern-most part of the county. The Ocala Limestone is considered to be part of the Floridan Aquifer System in Washington County.

### Oligocene Series

The Oligocene Series sediments in Washington County are difficult to distinguish on a strict lithologic basis. These deposits unconformably overlie the Ocala Limestone in the county. They consist of marine limestones and dolostones with differing fossil assemblages.

**Bridgeboro Limestone.**—The Bridgeboro Limestone (Huddlestun, 1981; Manker and Carter, 1987) is typically a white to yellow, fossiliferous marine limestone. It contains diagnostic fossils, including red algae and rhodoliths, which are rounded clasts created by wave action and algae. Green et al. (2002) mapped Bridgeboro Limestone in the northeast part of the county and indicated that this unit conformably overlies the Marianna Limestone in several cores and quarries. A good exposure of

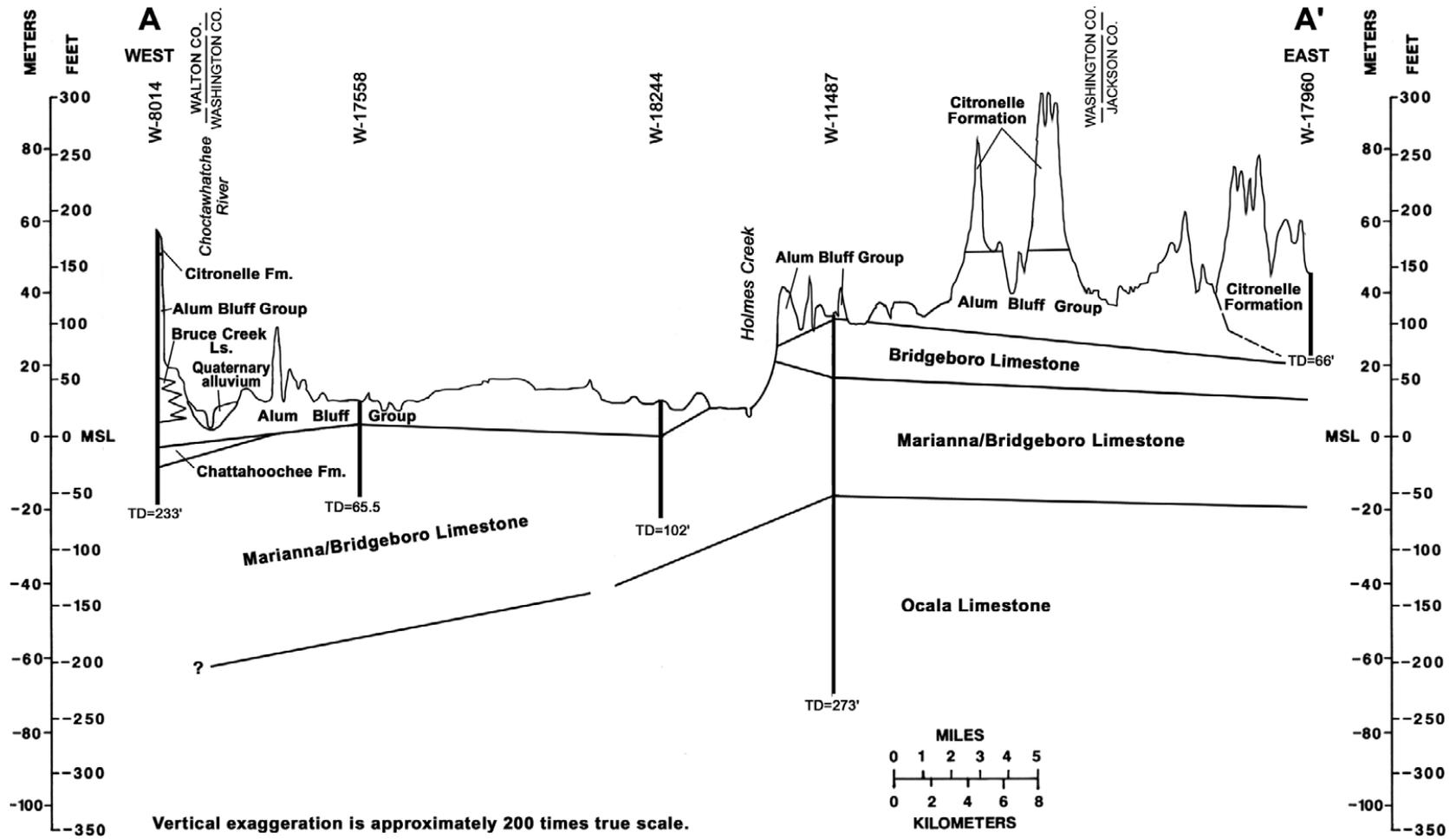


Figure 20.—Cross section of geologic materials at sites A to A'.

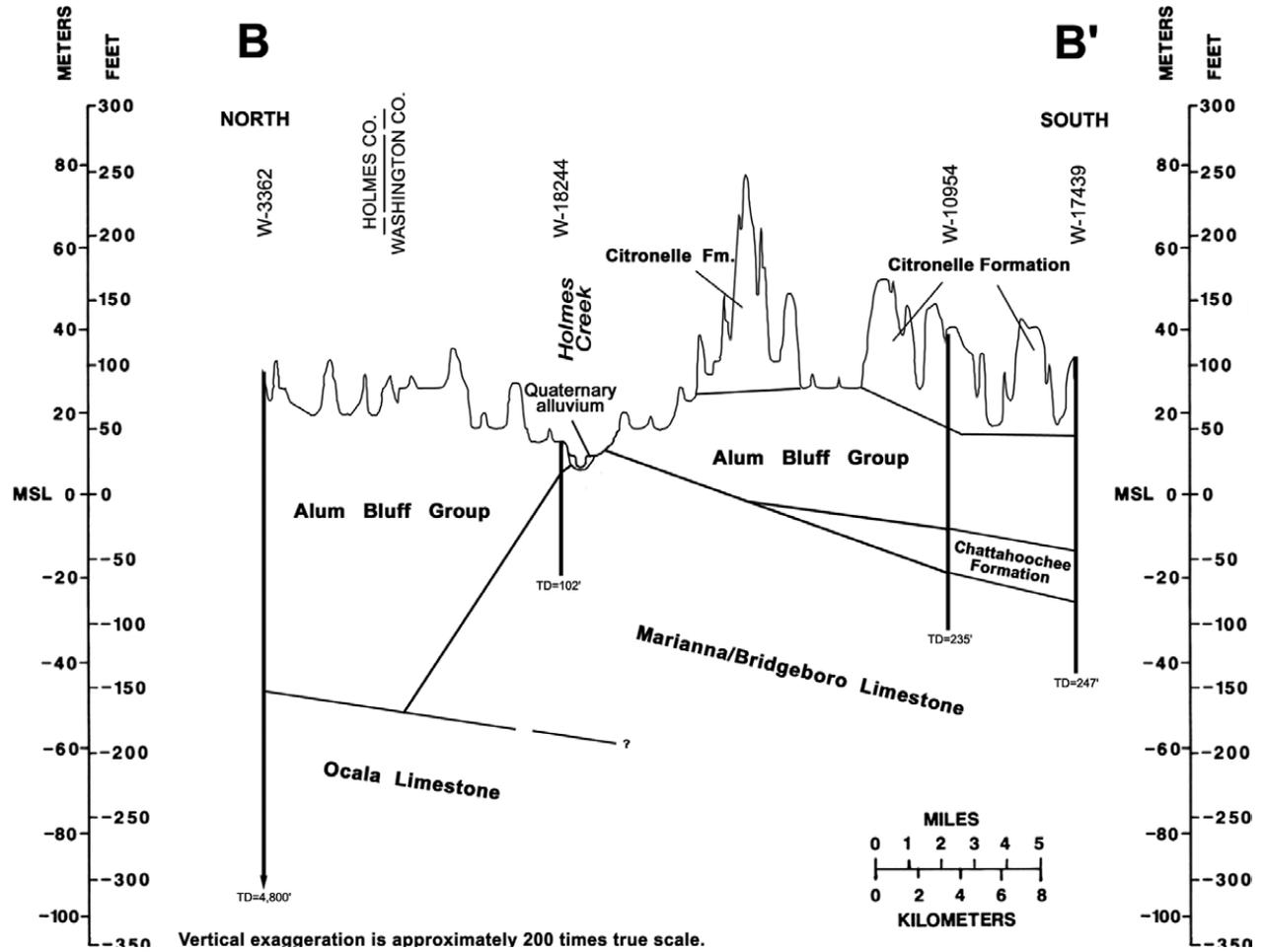


Figure 21.—Cross section of geologic materials at sites B to B'.

Bridgeboro Limestone can be seen in the Trawick Quarry (Green et al., 2002). The thickness of the Bridgeboro Limestone can reach up to 31 feet.

**Marianna Limestone.**—The Marianna Limestone (Matson and Clapp, 1909) is at or near the surface in the northeastern part of Washington County. Green et al. (2002) cite a good exposure of the unit at the Trawick Quarry southwest of Chipley. The Marianna Limestone ranges in color from white to cream to light gray. It is a soft, chalky, fine grained, poorly indurated limestone, typically containing abundant foraminifera. In the subsurface, the Marianna Limestone is commonly dolomitized and devoid of fossils.

**Suwannee Limestone.**—The designation of Suwannee Limestone (Cooke and Mansfield, 1936) to describe Oligocene sediments in Washington County is problematic. The Suwannee Limestone was originally identified in this region of the Florida panhandle by utilizing mollusk fossils (Mansfield, 1938 and 1940; Cooke, 1939). Vernon (1942) suggested that this correlation may be questionable because of the poor preservation of these fossils, and he defined the Suwannee Limestone in Holmes and Washington Counties, as “all limestone beds lying below the Tampa (Chattahoochee Formation) and above definite Marianna Limestone.” The stratigraphic unit that Cooke, Mansfield, and Vernon referred to as the Suwannee Limestone has been mapped by previous investigators under many different names (Reves, 1961). After extensive field work and further analyses of cores and cuttings, Green et al. (2002) concluded the unit mapped as Suwannee Limestone by previous authors is likely either Bridgeboro Limestone or undifferentiated Marianna/Bridgeboro Limestone. The latter convention is used in the cross sections.

The entire Oligocene section is variable in thickness across the county. Green et al. (2002) placed the top of the Marianna/Bridgeboro Limestone in a range from approximately 75 feet above MSL to 30 feet below MSL, with the unit attaining a maximum thickness of 250 feet in a well in the southeastern part of the county. These authors placed the top of the Bridgeboro Limestone between 95 and 125 feet above MSL in northeastern Washington County, where the unit reaches a maximum observed thickness of 31 feet. The Oligocene sediments comprise part of the Floridan Aquifer System in the region.

### **Miocene Series**

Sediments of the Miocene series unconformably overlie the Oligocene Series sediments in Washington County. The Miocene sediments consist of the Lower Miocene Chattahoochee Formation, the Middle Miocene Bruce Creek Limestone, and the Middle Miocene to Pliocene Alum Bluff Group.

**Chattahoochee Formation.**—The Chattahoochee Formation (Langdon, 1889) is composed of a predominately brownish gray, moderately indurated, sandy limestone in southern and eastern Washington County (Green et al., 2002). Green et al. (2002) noted the top of the Chattahoochee Formation in wells at elevations ranging from 160 feet above MSL in the northeastern part of the county to approximately mean sea level in southeastern part of the county. The formation attains a maximum observed thickness of 50 feet.

**Bruce Creek Limestone.**—The Bruce Creek Limestone (Huddlestun, 1976) is a white to light yellowish gray, moderately indurated marine limestone. In Washington County, it is a subsurface unit and extends into the western and southern parts of the county from adjacent Walton County. Green et al. (2002) observed a 26 foot thick section of Bruce Creek Limestone at a depth of 48 feet above MSL in one well in the southwestern part of the county. Schmidt (1984) shows the unit in the subsurface of southern Washington County at depths between about 80 feet above MSL and 125 feet below MSL, pinching out in the south-central part of the county.

**Alum Bluff Group.**—Sediments of the Miocene Alum Bluff Group (Huddlestun, 1984; Braunstein et al., 1988) unconformably overlie the older Oligocene and Eocene

units in most of the county and the Chattahoochee Formation where it is present. Lithologically, Alum Bluff Group sediments range from clayey sands and gravels to greenish, stiff, micaceous clays with variable admixtures of silt, sand, and shell. In river and stream valleys, the sediments are commonly a greenish, clay to clayey sand with some shell beds. The Alum Bluff Group occurs throughout most of Washington County and can generally be seen in outcrop at topographic elevations of less than 150 feet above MSL. Green et al. (2002) found that the unit attains a maximum thickness of 180 feet in wells.

### **Pliocene Series**

**Citronelle Formation.**—The name Citronelle Formation was applied by Matson (1916) to sediments exposed near Citronelle, Alabama. The general lithology of the Citronelle Formation in Washington County is orange to red, clayey, medium- to coarse-grained quartz sands and clayey sands with some clay lenses and beds of friable quartz pebbles. Crossbedding is present in many exposures. The original thickness of the formation is uncertain because erosion has removed the upper portion across much of the county. Green et al. (2002) noted locations where the thickness was over 110 feet in the northern part of the county. Many of the higher hills in Washington County are capped with the Citronelle Formation, and these may approximate the pre-erosion elevation of the extensive delta plain in which the unit was originally deposited.

Sediments of the Citronelle Formation blanket most of the southern portion of Washington County (fig. 19) and are on numerous hilltops throughout the county. The formation lies unconformably upon sediments of the Alum Bluff Group. Local deposits of Quaternary alluvium may overly the Citronelle Formation in river valleys.

### **Pleistocene–Holocene Series**

Washington County is blanketed with soil horizons and fluvial deposits that are of variable thickness and are generally considered to be Pleistocene to Holocene in age. The larger stream valleys within the county commonly contain deposits of Pleistocene and Holocene alluvium. Most of these sediments are derived from erosion of the Citronelle Formation and older units within the county as well as possible upstream sources in adjacent counties and Alabama. These undifferentiated deposits are typically sands, clays, and gravels. Some traces of carbonized wood and carbonaceous horizons of peat and humate are present (Green et al., 2002). Some deposits may be reddish due to the iron-rich nature of the Citronelle Formation from which they eroded.

### **Ground Water**

Ground water fills the pores and interstitial spaces in the rocks and sediments beneath the surface of the earth. Most of ground water in Washington County is derived from precipitation within the county, in neighboring counties in Florida, and in southern Alabama. A portion of the precipitation leaves the area by surface runoff in stream flow or by evapotranspiration. The remainder soaks into the ground, and some moves downward into the porous zone of saturation. The top of the zone of saturation is known as the water table. Once in the zone of saturation, the water moves under the influence of gravity towards discharge points, such as wells, seeps, springs, or eventually the Gulf of Mexico. Some of the water seeps into the deeper aquifer units, providing recharge to them.

In Washington County, three primary ground-water units are present. These are the Floridan Aquifer System, the Intermediate Aquifer System or Intermediate Confining Unit, and the Surficial Aquifer System (Copeland et al., in preparation).

### **Floridan Aquifer System**

The name Floridan Aquifer was originally proposed by Parker et al. (1955) for the artesian aquifer including all or parts of the Middle Eocene to Middle Miocene geological formations. The unit name was modified to Floridan Aquifer System by the Southeastern Geological Society Ad Hoc Committee (1986).

In Washington County, the Eocene Ocala Limestone, the Oligocene Mariana Limestone and Bridgeboro Limestone, the Miocene Chattahoochee Formation, and where present, the Bruce Creek Limestone, comprise the upper portion of the Floridan Aquifer System. Most freshwater supply wells in the county draw from the upper Floridan Aquifer System limestones at depths of 50 to 300 feet below land surface. The thickness of the Floridan Aquifer System ranges from about 100 feet in the north-central part of Washington County to about 700 feet in the southwestern part (Scott et al., 1991).

### **Intermediate Aquifer System**

The Intermediate Aquifer System, or Intermediate Confining Unit, is a system of low-permeability clays and interbedded carbonates forming confining units to both the underlying carbonates of the Floridan Aquifer System and localized aquifers. In most of Washington County, the Intermediate Aquifer System is locally contained within the Miocene portion of the undifferentiated Alum Bluff Group. In the north-central part of the county, principally near the Marianna Karst Plain, Oligocene residuum may form a confining unit to the underlying Florida Aquifer System (Scott et al., 1991). The thickness of the Intermediate Aquifer System in Washington County varies from about 50 to 100 feet (Scott et al., 1991).

### **Surficial Aquifer System**

Water in the shallow, Pliocene portion of undifferentiated Alum Bluff Group and Citronelle Formations is generally not confined, and the water level is free to rise and fall. This unconfined water comprises the Surficial Aquifer System. The Surficial Aquifer System reaches a maximum thickness of about 100 feet in north-central and southeastern Washington County (Scott et al., 1991). Because of the shallow depth at which freshwater is available from the Floridan Aquifer System, the Surficial Aquifer System is not used extensively in the county as a source of potable water.

### **Springs**

Springs are points where underground water emerges onto the earth's surface (Copeland, 2003). Scott et al. (2004) recognized 35 named springs and numerous unnamed springs in Washington County. Most are located along Holmes Creek and the Econfina River. These springs include one first-magnitude spring (flow greater than 100 cubic feet per second), Jack Paul Spring, which is located along Holmes Creek near the southwest corner of the town of Vernon. Second-magnitude springs (flow between 10 and 100 cubic feet per second) include Cypress and Beckton Springs, which are located north of Vernon along Holmes Creek; Washington Blue Spring Choctawhatchee, which is north of Ebro near the Choctawhatchee River; and Williford and Washington Blue Econfina Springs, which are in southeastern Washington County along the Econfina River (Scott et al., 2004). Most of the larger springs discharge freshwater from the Floridan Aquifer System and are used for recreation.

### **Mineral Resources**

Historically, several mineral commodities have been mined in Washington County for both commercial and public uses. The following discussion provides a general overview of the near-surface mineral commodities and potential petroleum resources in Washington County.

## **Clay**

Clay is a major constituent of the Chattahoochee Formation, Alum Bluff Group, and Citronelle Formation in Washington County. For the most part, the clays in these units are intermixed with varying proportions of carbonates, quartz sand, and gravel or occur as very thin, discontinuous beds. Although these formations cover much of Washington County, the impure, thinly-bedded nature of the contained clays generally precludes extensive utilization for fired products. During the 1920s to 1940s, however, the Hall Brick Company produced brick from a localized deposit of flood plain clay 2 miles southwest of Chipley (Bell, 1924). The brick was used for local construction. Vernon (1942) noted the presence of two nearly pure deposits of kaolin clay in the county but judged them noncommercial because of the thickness of the overburden. No other commercial clay operations have been viable in the county. Clayey sands, sometimes categorized as clay, are commonly mined for use as fill but would not be suitable for fired products. Future uses of clay in Washington County will depend largely on the discovery of suitable deposits and on local market demand.

## **Limestone and Dolostone**

Limestone ( $\text{CaCO}_3$ ) and dolostone ( $\text{CaMg}(\text{CO}_3)_2$ ) belonging to the Oligocene Marianna Limestone and Bridgeboro Limestone and the Miocene Chattahoochee Formation are near the surface in the northern part of Washington County. Reves (1961) and Yon and Hendry (1969) documented a number of areas that have commercial potential in the county.

Limestone is commonly used for construction materials, particularly as a roadbase and in the production of concrete and mortar. At least one small private pit southwest of Chipley produced limestone construction block for local use in the 1920s (Mossom, 1925). In recent years, limestone has been mined at two locations in Washington County. Choctawhatchee Rock Company operated a mine in the northwestern corner of the county near Hinson's Crossroads, and White Construction has intermittently operated the Trawick Mine southwest of Chipley. Future exploitation of this resource will depend on market demand.

## **Sand and Gravel**

Quartz sand and gravel ( $\text{SiO}_2$ ) are abundant across most of Washington County. They are a principal component of the Pleistocene-Holocene alluvial deposits and the Pliocene Citronelle Formation. Much of this material is interbedded and consolidated with clays and silts, and washing is required to extract the sand. In some cases, especially if the material is to be used as fill dirt, the content of clay is not significant. The primary commercial uses for this sand are road construction, fill, and asphalt additive.

During the 1920s, sand deposits southeast of Chipley were utilized for local plastering, concrete, bricklaying, and road surfacing. Similar deposits containing gravel were also dug near Vernon for use as concrete aggregate (Martens, 1928). In later years, several commercial companies and the county government extracted sands from various areas in Washington County for use in local projects (Spencer, 1989). The abundance of sand and gravel in Washington County makes the potential relatively high for mining impure, construction- and fill-grade sand. Due to the lack of demand, however, development of this industry on a large-scale basis remains unlikely.

## **Petroleum**

The recent production of oil in Florida occurred from sediments of Mesozoic age in two major areas. In southern Florida, a number of fields are situated along the Sunniland Trend and produced from the Lower Cretaceous Sunniland Formation. In northwestern Florida, a series of fields in northern Santa Rosa County produced oil from the Jurassic Smackover and Norphlet Formations (Applegate and Lloyd, 1985).

## Soil Survey of Washington County, Florida

Various companies have drilled a total of 14 test wells for oil in Washington County. The wells ranged in depth from 4,170 feet to 14,044 feet below land surface. None of the wells encountered producible oil or gas, and all were plugged and abandoned as dry holes. The position of Washington County updip of the productive portions of the Smackover and Norphlet Formation pinchouts likely precludes a high potential for petroleum in the area (Applegate et al., 1978).

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# Glossary

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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 at <http://soils.usda.gov/technical/handbook/>).

**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.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction toward which a slope faces. Also called slope aspect.

**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.

**Bedding plane.** A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

**Bedding system.** A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

**Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

- Bottom land.** An informal term loosely applied to various portions of a flood plain.
- Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- Breast height.** An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.
- Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.
- 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.
- Chemical treatment.** Control of unwanted vegetation through the use of chemicals.
- 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.
- Claypan.** A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.
- Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
- Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
- Concretions.** See Redoximorphic features.
- Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.
- Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
- Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness

of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

**Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

**Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

**Corrosion** (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

**Corrosion** (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

**Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

**Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

**Cropping system.** Growing crops according to a planned system of rotation and management practices.

**Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

**Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.

**Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.

**Depression.** Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage (e.g. a sinkhole). An open depression has a natural outlet for surface drainage.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Dip slope.** A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

**Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

**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.

**Ecological site.** An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an

association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

- Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.
- Eolian deposit.** Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.
- 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.
- Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.
- Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.
- Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.
- Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.
- Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.
- Fine textured soil.** Sandy clay, silty clay, or clay.
- First bottom.** An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.
- Flat.** An informal, generic term for a level or nearly level surface or small area of land marked by little or no local relief.
- Flatwoods.** Broad, low-gradient, low-relief interstream areas characterized by poorly drained soils that are naturally forested by pines and have an understory dominated by saw palmetto. Flatwoods are slightly above minor depressions that have a seasonal water table at or above the surface, drainageways, and heads of drains and are below better drained and slightly higher small rises or knolls.
- 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.
- Fluviomarine deposit.** Stratified materials (clay, silt, sand, or gravel) formed by both marine and fluvial processes, resulting from nontidal sea level fluctuations, subsidence, and/or stream migration (i.e. materials originally deposited in a nearshore environment and subsequently reworked by fluvial processes as sea level fell).

- Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).
- Forb.** Any herbaceous plant not a grass or a sedge.
- Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.
- Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.
- 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.
- Graded stripcropping.** Growing crops in strips that grade toward a protected waterway.
- Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.
- Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.
- Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.
- Green manure crop (agronomy).** A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.
- Ground water.** Water filling all the unblocked pores of the material below the water table.
- Gully.** A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.
- Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
- 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.
- Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.
- Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.
- Hillslope.** A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.
- Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:
- O horizon.*—An organic layer of fresh and decaying plant residue.
- L horizon.*—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Soft, consolidated bedrock beneath the soil.

*R layer.*—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties 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.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Intake rate.** The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2 .....	very low
0.2 to 0.4 .....	low
0.4 to 0.75 .....	moderately low
0.75 to 1.25 .....	moderate
1.25 to 1.75 .....	moderately high
1.75 to 2.5 .....	high
More than 2.5 .....	very high

**Iron depletions.** See Redoximorphic features.

**Irrigation.** Application of water to soils to assist in production of crops. Methods of irrigation are:

*Basin.*—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

*Border.*—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

*Controlled flooding.*—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

*Corrugation.*—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

*Drip (or trickle).*—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

*Furrow.*—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

*Sprinkler.*—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

*Subirrigation.*—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

*Wild flooding.*—Water, released at high points, is allowed to flow onto an area without controlled distribution.

**Karst (topography).** A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

**Knoll.** A small, low, rounded hill rising above adjacent landforms.

**Ksat.** Saturated hydraulic conductivity. (See Permeability.)

**Lamellae.** Thin (less than 7.5 centimeters thick) illuvial horizons that have evidence of translocated clay and have more clay than overlying eluvial horizons. Sequences of lamellae can qualify as a cambic horizon if they have a combined thickness of more than 15 centimeters and are not sandy, or they can qualify as an argillic horizon if they have a combined thickness of more than 15 centimeters and the increase in content of clay is sufficiently large between the lamellae and eluvial horizons.

**Landslide.** A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

**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.

**Marine terrace.** A constructional coastal strip, sloping gently seaward, veneered by marine deposits (typically silt, sand, and fine gravel).

**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.
- Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.
- Miscellaneous area.** A kind of map unit that has little or no natural soil and supports little or no vegetation.
- Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.
- Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.
- 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.
- Nose slope (geomorphology).** A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slopewash sediments (for example, slope alluvium).
- Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.
- Organic matter.** Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:
- |                     |                       |
|---------------------|-----------------------|
| Very low .....      | less than 0.5 percent |
| Low .....           | 0.5 to 1.0 percent    |
| Moderately low..... | 1.0 to 2.0 percent    |
| Moderate.....       | 2.0 to 4.0 percent    |
| High .....          | 4.0 to 8.0 percent    |
| Very high.....      | more than 8.0 percent |
- Pan.** A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan, and traffic pan*.
- Parent material.** The unconsolidated organic and mineral material in which soil forms.
- Peat.** Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)
- Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.
- Pedon.** The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.
- Percolation.** The movement of water through the soil.

**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.)

**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.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Pore linings.** See Redoximorphic features.

**Potential native plant community.** See Climax plant community.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Prescribed burning.** Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**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 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 skeletalans).
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.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

**Ridge.** A long, narrow elevation of the land surface, typically having a sharp crest and steep sides and forming an extended upland between valleys.

**Rill.** A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

**Rise.** A geomorphic component of flat plains consisting of a slightly elevated but low, broad area with low slope gradients (1 to 3 percent slopes). Typically, soils on a rise are better drained than those on the surrounding lower area.

**Riser.** The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

**Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

- Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
- Root zone.** The part of the soil that can be penetrated by plant roots.
- Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called groundwater runoff or seepage flow from ground water.
- Saline soil.** A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.
- Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
- Sandstone.** Sedimentary rock containing dominantly sand-sized particles.
- Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
- Saturated hydraulic conductivity (Ksat).** 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.
- Sedimentary rock.** A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.
- Seep.** An area, generally small, where water flows out slowly at the land surface. Flow rates are too small for seeps to be considered as springs, but reflow and/or lateral subsurface flow keeps the surface soil or near-surface soil saturated during dry periods.
- Seepage** (in tables). The movement of water through the soil. Seepage adversely affects the specified use.
- 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.
- Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.
- Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- Side slope** (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.
- Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- 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.

**Sinkhole.** A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

**Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

**Slickensides** (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Level .....	0 to 2 percent
Gently sloping .....	2 to 5 percent
Moderately sloping.....	5 to 8 percent
Strongly sloping.....	8 to 15 percent
Moderately steep .....	15 to 25 percent
Steep .....	25 to 45 percent
Very steep.....	45 percent and higher

Classes for complex slopes are as follows:

Level .....	0 to 2 percent
Gently undulating.....	2 to 5 percent
Undulating.....	5 to 8 percent
Rolling.....	8 to 15 percent
Hilly.....	15 to 25 percent
Steep .....	25 to 45 percent
Very steep.....	45 percent and higher

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand .....	2.0 to 1.0
Coarse sand .....	1.0 to 0.5
Medium sand .....	0.5 to 0.25
Fine sand.....	0.25 to 0.10
Very fine sand.....	0.10 to 0.05
Silt .....	0.05 to 0.002
Clay.....	less than 0.002

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

**Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.

- Stream terrace.** One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.
- Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.
- Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (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.
- Subsoiling.** Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.
- Substratum.** The part of the soil below the solum.
- Subsurface layer.** Any surface soil horizon (A, E, AB, or EB) below the surface layer.
- Summer fallow.** The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.
- 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 (conservation).** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
- Terrace (geomorphology).** A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.
- 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.
- Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
- Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
- 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.

**Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

**Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

**Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

**Wilting point (or permanent wilting point).** The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

**Windthrow.** The uprooting and tipping over of trees by the wind.

# Tables

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# Soil Survey of Washington County, Florida

Table 1.--Temperature and Precipitation

[Recorded in the period 1971 to 2000 at Chipley, Florida]

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Avg.	2 years in 10 will have--		Average number of days with 0.10 inch	Average snowfall
				Max. temp. higher than--	Min. temp. lower than--			Less than--	More than--		
°F	°F	°F	°F	°F	Units	In	In	In	In	In	
January----	60.2	37.6	48.9	78	15	305	6.25	4.11	8.38	7	0.1
February---	64.7	40.5	52.6	82	21	368	4.90	2.77	6.99	6	0.0
March-----	71.8	46.9	59.3	86	27	601	6.11	3.79	8.30	7	0.0
April-----	78.3	52.3	65.3	90	35	757	3.84	1.28	6.22	4	0.0
May-----	85.0	60.6	72.8	95	44	1,011	4.44	2.10	6.66	5	0.0
June-----	89.7	67.8	78.8	99	55	1,151	5.29	2.31	7.86	7	0.0
July-----	91.3	70.7	81.0	99	64	1,270	6.97	3.60	9.67	10	0.0
August-----	90.8	70.0	80.4	98	61	1,251	5.45	3.43	7.20	8	0.0
September--	87.5	65.7	76.6	96	49	1,094	4.77	1.72	7.46	6	0.0
October----	79.6	53.6	66.6	90	34	812	2.90	1.12	4.56	3	0.0
November---	70.9	45.7	58.3	85	28	548	4.02	1.84	5.90	5	0.0
December---	63.0	39.7	51.4	81	18	371	3.89	2.13	5.69	5	0.0
Yearly:											
Average--	77.7	54.3	66.0	---	---	---	---	---	---	---	---
Extreme--	104	2	---	100	13	---	---	---	---	---	---
Total----	---	---	---	---	---	9,539	58.84	47.25	67.36	73	0.1

\* 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 (40 degrees F).

# Soil Survey of Washington County, Florida

Table 2.--Freeze Dates in Spring and Fall

[Recorded in the period 1961 to 1990 at Chipley, Florida]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
<b>Last freezing temperature in spring:</b>			
1 year in 10 later than--	Feb. 25	Mar. 10	Mar. 27
2 years in 10 later than--	Feb. 16	Mar. 3	Mar. 20
5 years in 10 later than--	Jan. 30	Feb. 20	Mar. 6
<b>First freezing temperature in fall:</b>			
1 year in 10 earlier than--	Nov. 30	Nov. 10	Oct. 28
2 years in 10 earlier than--	Dec. 9	Nov. 17	Nov. 2
5 years in 10 earlier than--	Dec. 25	Dec. 1	Nov. 13

Soil Survey of Washington County, Florida

Table 3.--Growing Season

[Recorded in the period 1970 to 2000 at Chipley, Florida]

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<i>Days</i>	<i>Days</i>	<i>Days</i>
9 years in 10	286	259	227
8 years in 10	303	270	237
5 years in 10	334	290	256
2 years in 10	>365	311	276
1 year in 10	>365	322	286

Soil Survey of Washington County, Florida

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
2	Rutlege, Pickney, and Pamlico soils, frequently flooded-----	33,670	8.6
4	Gritney loamy sand, 2 to 5 percent slopes-----	620	0.2
7	Bladen-Dunbar complex, occasionally flooded-----	1,330	0.3
9	Albany-Chipley-Leon complex, 0 to 5 percent slopes-----	4,840	1.2
11	Dothan loamy sand, 0 to 2 percent slopes-----	8,820	2.2
12	Dothan loamy sand, 2 to 5 percent slopes-----	45,910	11.7
14	Dothan loamy sand, 5 to 8 percent slopes-----	3,260	0.8
18	Fuquay-Dothan complex, 5 to 8 percent slopes-----	2,960	0.8
22	Nankin-Cowarts complex, 2 to 5 percent slopes, eroded-----	6,720	1.7
23	Nankin-Cowarts complex, 5 to 8 percent slopes, eroded-----	3,550	0.9
29	Dunbar loamy sand, 2 to 5 percent slopes, occasionally flooded-----	1,440	0.4
35	Lucy-Troup complex, 0 to 5 percent slopes-----	1,260	0.3
36	Troup-Lucy complex, 5 to 8 percent slopes-----	640	0.2
39	Bonifay-Fuquay complex, 0 to 5 percent slopes-----	9,860	2.5
40	Bonifay loamy sand, 5 to 8 percent slopes-----	1,900	0.5
41	Lucy sand, 0 to 5 percent slopes-----	1,170	0.3
52	Grady loam, ponded-----	144	*
54	Albany-Ocilla complex, 0 to 5 percent slopes, occasionally flooded-----	7,340	1.9
55	Chipley-Albany-Hurricane complex, 0 to 5 percent slopes-----	10,510	2.7
56	Albany-Ocilla complex, 5 to 8 percent slopes-----	1,460	0.4
57	Ocilla-Leafield complex, 0 to 5 percent slopes-----	5,560	1.4
61	Lakeland sand, 8 to 12 percent slopes-----	9,640	2.4
62	Lakeland sand, 12 to 45 percent slopes-----	5,130	1.3
63	Lakeland sand, 0 to 5 percent slopes-----	69,660	17.7
64	Lakeland sand, 5 to 8 percent slopes-----	12,440	3.2
67	Nankin-Cowarts-Lakeland complex, 5 to 12 percent slopes-----	12,130	3.1
68	Nankin-Cowarts-Lakeland complex, 12 to 45 percent slopes, eroded-----	3,540	0.9
71	Lynchburg loamy fine sand, 0 to 2 percent slopes-----	11,920	3.0
72	Lynchburg loamy fine sand, 2 to 5 percent slopes-----	1,620	0.4
85	Searcy-Oktibbeha complex, 2 to 5 percent slopes-----	200	*
86	Hannon-Oktibbeha complex, 5 to 8 percent slopes-----	180	*
87	Clara and Plummer soils, occasionally ponded-----	6,540	1.7
90	Rains and Bayboro soils, depressionnal-----	9,180	2.3
91	Orangeburg loamy sand, 2 to 5 percent slopes-----	3,730	0.9
96	Orangeburg loamy sand, 5 to 8 percent slopes-----	220	*
98	Rutlege loamy fine sand, depressionnal-----	3,560	0.9
99	Water-----	12,460	3.2
100	Leon-Chipley complex-----	474	0.1
106	Pantego and Clara soils, ponded-----	36,980	9.4
110	Arents, 0 to 8 percent slopes-----	470	0.1
112	Pottsburg sand, occasionally flooded-----	149	*
113	Pits-Udorthents complex, reclaimed, 0 to 90 percent slopes-----	840	0.2
116	Blanton-Lakeland complex, 0 to 5 percent slopes-----	9,090	2.3
117	Blanton-Lakeland complex, 5 to 8 percent slopes-----	2,730	0.7
119	Blanton-Lakeland complex, 8 to 12 percent slopes-----	1,760	0.4
121	Goldsboro loamy sand, 0 to 2 percent slopes-----	2,460	0.6
122	Goldsboro loamy sand, 2 to 5 percent slopes-----	6,570	1.7
123	Blanton-Lakeland complex, 12 to 45 percent slopes-----	143	*
127	Goldsboro loamy sand, 5 to 8 percent slopes-----	380	*
128	Blanton-Bonneau complex, 0 to 5 percent slopes-----	10,460	2.7
129	Blanton-Bonneau complex, 5 to 8 percent slopes-----	6,180	1.6
	Total-----	393,800	100.0

\* Less than 0.1 percent.

Soil Survey of Washington County, Florida

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Bahiagrass	Corn	Peanuts	Soybeans	Watermelons
		<i>AUM</i>	<i>Bu</i>	<i>Lbs</i>	<i>Bu</i>	<i>Tons</i>
2:						
Rutlege-----	6w	---	---	---	---	---
Pickney-----	6w	---	---	---	---	---
Pamlico-----	7w	---	---	---	---	---
4:						
Gritney-----	3e	---	96	2,308	34	---
7:						
Bladen-----	6w	---	---	---	---	---
Dunbar-----	2w	10	---	---	---	---
9:						
Albany-----	3e	6.5	85	---	25	10
Chipley-----	3s	7.5	50	---	20	5
Leon-----	4w	7.5	50	---	20	---
11:						
Dothan-----	1	9	120	3,800	40	12
12:						
Dothan-----	2e	9	120	3,600	35	12
14:						
Dothan-----	3e	8	100	3,600	30	6
18:						
Fuquay-----	3s	7.5	75	2,600	25	8
Dothan-----	3e	8	100	3,600	30	6
22:						
Nankin-----	2e	7	80	2,200	35	---
Cowarts-----	2e	8.5	80	2,400	35	---
23:						
Nankin-----	3e	6	55	1,800	20	---
Cowarts-----	3e	7.5	70	1,800	25	---
29:						
Dunbar-----	2w	10	115	2,600	45	---
35:						
Lucy-----	2s	8.5	80	3,000	33	11
Troup-----	3s	7.2	60	2,200	25	12
36:						
Troup-----	4s	7	55	1,800	22	10
Lucy-----	3s	7.5	70	2,500	25	7

Soil Survey of Washington County, Florida

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Corn	Peanuts	Soybeans	Watermelons
		<i>AUM</i>	<i>Bu</i>	<i>Lbs</i>	<i>Bu</i>	<i>Tons</i>
39:						
Bonifay-----	3s	7.2	50	1,600	24	12
Fuquay-----	2s	8.5	80	2,900	30	10
40:						
Bonifay-----	4s	7.2	45	1,400	20	10
41:						
Lucy-----	2s	8.5	80	3,000	33	11
52:						
Grady-----	5w	---	---	---	---	---
54:						
Albany-----	3w	6.5	---	---	---	---
Ocilla-----	4w	8	---	---	---	---
55:						
Chipley-----	3s	7.5	50	---	20	5
Albany-----	3e	6.5	75	---	25	10
Hurricane-----	3w	7	45	---	25	---
56:						
Albany-----	3e	6.5	75	---	25	10
Ocilla-----	3w	6.5	55	---	25	---
57:						
Ocilla-----	3w	7.5	75	---	35	---
Leefield-----	2w	8	85	---	35	---
61:						
Lakeland-----	6s	6.5	---	---	---	---
62:						
Lakeland-----	7s	6	---	---	---	---
63:						
Lakeland-----	3s	6.5	55	2,000	20	---
64:						
Lakeland-----	4s	6.5	---	---	---	---
67:						
Nankin-----	6e	6	---	---	---	---
Cowarts-----	4e	---	---	---	---	---
Lakeland-----	6s	6.5	---	---	---	---
68:						
Nankin-----	7e	---	---	---	---	---
Cowarts-----	7e	---	---	---	---	---
Lakeland-----	7s	---	---	---	---	---

Soil Survey of Washington County, Florida

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Corn	Peanuts	Soybeans	Watermelons
		<i>AUM</i>	<i>Bu</i>	<i>Lbs</i>	<i>Bu</i>	<i>Tons</i>
71: Lynchburg-----	2w	10	115	---	45	---
72: Lynchburg-----	2w	10	115	---	45	---
85: Searcy-----	3e	8.5	75	---	35	---
Oktibbeha-----	3e	8	55	---	35	---
86: Hannon-----	4e	7.5	50	---	30	---
Oktibbeha-----	4e	7.5	50	---	30	---
87: Clara-----	6w	---	---	---	---	---
Plummer-----	4w	5	---	---	---	---
90: Rains-----	4w	---	---	---	---	---
Bayboro-----	6w	---	---	---	---	---
91: Orangeburg-----	2e	8.5	120	4,000	45	14
96: Orangeburg-----	3e	8	95	3,200	35	10
98: Rutlege-----	5w	---	---	---	---	---
99: Water.						
100: Leon-----	4w	7.5	50	---	20	---
Chipley-----	3s	7.5	50	---	20	---
106: Pantego-----	6w	---	---	---	---	---
Clara-----	6w	---	---	---	---	---
110: Arents-----	8	---	---	---	---	---
112: Pottsburg-----	4w	7	---	---	---	---
113: Pits-----	8	---	---	---	---	---
Udorthents-----	6e	---	---	---	---	---
116: Blanton-----	2s	6.5	60	2,200	25	---
Lakeland-----	3s	6.5	55	2,000	20	---

Soil Survey of Washington County, Florida

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Corn	Peanuts	Soybeans	Watermelons
		<i>AUM</i>	<i>Bu</i>	<i>Lbs</i>	<i>Bu</i>	<i>Tons</i>
117:						
Blanton-----	3s	6.5	---	---	---	---
Lakeland-----	4s	6.5	---	---	---	---
119:						
Blanton-----	4s	6.5	---	---	---	---
Lakeland-----	6s	6.5	---	---	---	---
121:						
Goldsboro-----	2w	8.5	125	3,600	45	---
122:						
Goldsboro-----	2e	8.5	115	3,400	40	---
123:						
Blanton-----	6s	5	---	---	---	---
Lakeland-----	7s	6	---	---	---	---
127:						
Goldsboro-----	3e	8	---	---	---	---
128:						
Blanton-----	2s	6.5	60	2,200	25	12
Bonneau-----	2s	8	85	2,900	30	10
129:						
Blanton-----	3s	6.5	60	2,200	25	12
Bonneau-----	3s	6.5	60	2,000	20	---

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste 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	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Too acid	1.00
		Leaching	0.90	Filtering capacity	0.99
		Too acid	0.86	Droughty	0.23
Pickney-----	25	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Too acid	1.00
		Leaching	0.90	Filtering capacity	0.99
		Too acid	0.82	Droughty	0.01
Pamlico-----	19	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Too acid	1.00
		Leaching	0.90	Filtering capacity	0.99
4: Gritney-----	86	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Too acid	0.27	Too acid	0.85
7: Bladen-----	60	Very limited Slow water movement	1.00	Very limited Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Too acid	0.73	Slow water movement	1.00
		Flooding	0.60	Too acid	1.00
		Leaching	0.50		
Dunbar-----	25	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
		Leaching	0.50	Too acid	0.99
		Too acid	0.43	Slow water movement	0.22
		Slow water movement	0.30		

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9: Albany-----	38	Very limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.24	Very limited Filtering capacity Too acid Depth to saturated zone Droughty	1.00 0.99 0.99 0.24
Chipley-----	20	Somewhat limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	0.99 0.99 0.82 0.45 0.21	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.21
Leon-----	16	Very limited Depth to saturated zone Filtering capacity Leaching Too acid	1.00 0.99 0.90 0.43	Very limited Depth to saturated zone Filtering capacity Too acid	1.00 0.99 0.99
11: Dothan-----	93	Somewhat limited Slow water movement Too acid Low adsorption Depth to saturated zone	0.50 0.50 0.05 0.02	Somewhat limited Too acid Slow water movement Depth to saturated zone	0.99 0.37 0.02
12: Dothan-----	88	Somewhat limited Slow water movement Too acid Low adsorption Depth to saturated zone	0.50 0.50 0.04 0.02	Somewhat limited Too acid Slow water movement Depth to saturated zone	0.99 0.37 0.02
14: Dothan-----	87	Somewhat limited Slow water movement Too acid Low adsorption Depth to saturated zone	0.50 0.50 0.07 0.02	Somewhat limited Too acid Slow water movement Depth to saturated zone	0.99 0.37 0.02
18: Fuquay-----	55	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.32 0.05	Somewhat limited Filtering capacity Too acid	0.99 0.91

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
18: Dothan-----	25	Somewhat limited Slow water movement Too acid Low adsorption Depth to saturated zone	0.50  0.50 0.07 0.02	Somewhat limited Too acid Slow water movement Depth to saturated zone	0.99  0.37  0.02
22: Nankin-----	52	Somewhat limited Low adsorption Slow water movement Too acid	0.82 0.50 0.50	Somewhat limited Too acid Low adsorption Slow water movement	0.99 0.88 0.37
Cowarts-----	25	Somewhat limited Low adsorption Slow water movement Too acid Depth to saturated zone	0.88 0.75 0.43 0.02	Somewhat limited Too acid Slow water movement Low adsorption Depth to saturated zone	0.99 0.61 0.37 0.02
23: Nankin-----	57	Somewhat limited Low adsorption Slow water movement Too acid	0.76 0.50 0.50	Somewhat limited Too acid Low adsorption Slow water movement	0.99 0.66 0.37
Cowarts-----	21	Somewhat limited Low adsorption Slow water movement Too acid Depth to saturated zone	0.91 0.75 0.43 0.02	Somewhat limited Too acid Slow water movement Low adsorption Depth to saturated zone	0.99 0.61 0.61 0.02
29: Dunbar-----	72	Very limited Depth to saturated zone Flooding Leaching Too acid Slow water movement	1.00  0.60 0.50 0.43 0.30	Very limited Depth to saturated zone Flooding Too acid Slow water movement	1.00  1.00 0.99 0.22
35: Lucy-----	45	Somewhat limited Filtering capacity Too acid Low adsorption	0.99  0.50 0.14	Somewhat limited Filtering capacity Too acid	0.99  0.99

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35: Troup-----	42	Somewhat limited Filtering capacity Leaching Too acid	0.99  0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99  0.91
36: Troup-----	45	Somewhat limited Filtering capacity Leaching Too acid	0.99  0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99  0.91
Lucy-----	40	Somewhat limited Filtering capacity Too acid Low adsorption	0.99  0.50 0.37	Somewhat limited Filtering capacity Too acid	0.99  0.99
39: Bonifay-----	50	Very limited Filtering capacity Leaching Slow water movement Too acid	1.00  0.45 0.41 0.32	Very limited Filtering capacity Too acid Slow water movement	1.00  0.91 0.31
Fuquay-----	34	Somewhat limited Filtering capacity Too acid	0.99  0.32	Somewhat limited Filtering capacity Too acid	0.99  0.91
40: Bonifay-----	80	Very limited Filtering capacity Leaching Slow water movement Too acid	1.00  0.45 0.41 0.32	Very limited Filtering capacity Too acid Slow water movement	1.00  0.91 0.31
41: Lucy-----	70	Somewhat limited Filtering capacity Too acid Low adsorption	0.99  0.50 0.12	Somewhat limited Filtering capacity Too acid	0.99  0.99
52: Grady-----	85	Very limited Slow water movement Depth to saturated zone Ponding Too acid Leaching	1.00  1.00 1.00 0.73 0.50	Very limited Depth to saturated zone Slow water movement Too acid Ponding Low adsorption	1.00  1.00 1.00 1.00 0.01

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Albany-----	63	Very limited Filtering capacity Depth to saturated zone Flooding Too acid Leaching	1.00 0.99 0.60 0.50 0.45	Very limited Filtering capacity Flooding Too acid Depth to saturated zone Droughty	1.00 1.00 0.99 0.99 0.16
Ocilla-----	24	Very limited Depth to saturated zone Leaching Flooding Too acid	1.00 0.70 0.60 0.50	Very limited Depth to saturated zone Flooding Too acid	1.00 1.00 0.99
55: Chipley-----	55	Somewhat limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	0.99 0.99 0.82 0.45 0.19	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.19
Albany-----	27	Very limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.16	Very limited Filtering capacity Too acid Depth to saturated zone Droughty	1.00 0.99 0.99 0.16
Hurricane-----	15	Somewhat limited Filtering capacity Depth to saturated zone Too acid Leaching	0.99 0.99 0.62 0.45	Very limited Too acid Filtering capacity Depth to saturated zone	1.00 0.99 0.99
56: Albany-----	72	Very limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	1.00 0.99 0.50 0.45 0.01	Very limited Filtering capacity Too acid Depth to saturated zone Droughty	1.00 0.99 0.99 0.01
Ocilla-----	16	Very limited Depth to saturated zone Leaching Too acid	1.00 0.70 0.50	Very limited Depth to saturated zone Too acid	1.00 0.99

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
57: Ocilla-----	70	Very limited Depth to saturated zone Leaching Too acid	1.00 0.70 0.50	Very limited Depth to saturated zone Too acid	1.00 0.99
Leefield-----	18	Somewhat limited Filtering capacity Depth to saturated zone Slow water movement Too acid Leaching	0.99 0.99 0.50 0.50 0.45	Somewhat limited Filtering capacity Too acid Depth to saturated zone Slow water movement	0.99 0.99 0.99 0.37
61: Lakeland-----	74	Somewhat limited Filtering capacity Droughty Too acid Leaching Slope	0.99 0.71 0.50 0.45 0.16	Somewhat limited Filtering capacity Too acid Droughty Slope	0.99 0.99 0.71 0.16
62: Lakeland-----	77	Very limited Too steep Filtering capacity Droughty Too acid Leaching	1.00 0.99 0.73 0.50 0.45	Very limited Too steep Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.73
63: Lakeland-----	76	Somewhat limited Filtering capacity Droughty Too acid Leaching	0.99 0.68 0.50 0.45	Somewhat limited Filtering capacity Too acid Droughty	0.99 0.99 0.68
64: Lakeland-----	70	Somewhat limited Filtering capacity Droughty Too acid Leaching	0.99 0.69 0.50 0.45	Somewhat limited Filtering capacity Too acid Droughty	0.99 0.99 0.69
67: Nankin-----	52	Somewhat limited Low adsorption Slow water movement Too acid Slope	0.83 0.50 0.50 0.04	Somewhat limited Too acid Low adsorption Slow water movement Slope	0.99 0.89 0.37 0.04

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
67: Cowarts-----	28	Somewhat limited		Somewhat limited	
		Low adsorption	0.94	Too acid	0.99
		Slow water movement	0.75	Low adsorption	0.81
		Too acid	0.43	Slow water movement	0.61
		Slope	0.04	Slope	0.04
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
Lakeland-----	17	Somewhat limited		Somewhat limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Droughty	0.70	Too acid	0.99
		Too acid	0.50	Droughty	0.70
		Leaching	0.45	Slope	0.04
		Slope	0.04		
68: Nankin-----	50	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Low adsorption	0.84	Too acid	0.99
		Slow water movement	0.50	Low adsorption	0.88
		Too acid	0.50	Slow water movement	0.37
Cowarts-----	30	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Low adsorption	0.94	Too acid	0.99
		Slow water movement	0.75	Low adsorption	0.83
		Too acid	0.43	Slow water movement	0.61
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
Lakeland-----	16	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Droughty	0.73	Too acid	0.99
		Too acid	0.50	Droughty	0.73
		Leaching	0.45		
71: Lynchburg-----	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Leaching	0.70	Too acid	0.99
		Slow water movement	0.50	Slow water movement	0.37
		Too acid	0.43		

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
72: Lynchburg-----	88	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Leaching	0.70	Too acid	0.99
		Slow water movement	0.50	Slow water movement	0.37
		Too acid	0.43		
85: Searcy-----	56	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Depth to saturated zone	0.95	Too acid	0.99
		Too acid	0.43	Depth to saturated zone	0.95
Oktibbeha-----	31	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Runoff	0.40		
86: Hannon-----	60	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Runoff	0.40	Too acid	0.07
		Too acid	0.02		
Oktibbeha-----	40	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Runoff	0.40		
87: Clara-----	50	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Leaching	0.90	Too acid	0.99
		Too acid	0.50		
Plummer-----	30	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Too acid	1.00
		Leaching	0.90	Filtering capacity	0.99
		Too acid	0.73		

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
90: Rains-----	56	Very limited Depth to saturated zone Ponding Leaching Too acid	1.00 1.00 0.70 0.43	Very limited Depth to saturated zone Ponding Too acid	1.00 1.00 0.99
Bayboro-----	40	Very limited Slow water movement Depth to saturated zone Ponding Too acid Leaching	1.00 1.00 1.00 0.73 0.50	Very limited Depth to saturated zone Slow water movement Too acid Ponding	1.00 1.00 1.00 1.00
91: Orangeburg-----	87	Somewhat limited Low adsorption Too acid	0.61 0.27	Somewhat limited Too acid Low adsorption	0.85 0.23
96: Orangeburg-----	90	Somewhat limited Low adsorption Too acid	0.69 0.27	Somewhat limited Too acid Low adsorption	0.85 0.50
98: Rutlege-----	75	Very limited Ponding Depth to saturated zone Flooding Filtering capacity Leaching	1.00 1.00 1.00 0.99 0.90	Very limited Ponding Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 1.00 0.99
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone Filtering capacity Leaching Too acid	1.00 0.99 0.90 0.43	Very limited Depth to saturated zone Filtering capacity Too acid	1.00 0.99 0.99
Chipley-----	32	Somewhat limited Filtering capacity Depth to saturated zone Too acid Leaching Droughty	0.99 0.99 0.82 0.45 0.17	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.17

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
106: Pantego-----	55	Very limited Ponding Depth to saturated zone Too acid Leaching	1.00 1.00 0.78 0.70	Very limited Ponding Depth to saturated zone Too acid	1.00 1.00 1.00
Clara-----	30	Very limited Ponding Depth to saturated zone Filtering capacity Leaching Too acid	1.00 1.00 0.99 0.90 0.50	Very limited Ponding Depth to saturated zone Filtering capacity Too acid	1.00 1.00 0.99 0.99
110: Arents-----	86	Very limited Filtering capacity Droughty Depth to saturated zone Leaching Too acid	1.00 0.99 0.95 0.45 0.43	Very limited Filtering capacity Too acid Droughty Depth to saturated zone	1.00 0.99 0.99 0.95
112: Pottsburg-----	72	Very limited Depth to saturated zone Filtering capacity Leaching Flooding Too acid	1.00 0.99 0.90 0.60 0.43	Very limited Depth to saturated zone Flooding Filtering capacity Too acid	1.00 1.00 0.99 0.99
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Very limited Too steep Too acid	1.00 0.02	Very limited Too steep Too acid	1.00 0.07
116: Blanton-----	50	Somewhat limited Filtering capacity Leaching Too acid	0.99 0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99 0.91
Lakeland-----	40	Somewhat limited Filtering capacity Droughty Too acid Leaching	0.99 0.68 0.50 0.45	Somewhat limited Filtering capacity Too acid Droughty	0.99 0.99 0.68

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Blanton-----	55	Somewhat limited Filtering capacity Leaching Too acid	0.99  0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99  0.91
Lakeland-----	38	Somewhat limited Filtering capacity Droughty Too acid Leaching	0.99  0.70 0.50 0.45	Somewhat limited Filtering capacity Too acid Droughty	0.99  0.99 0.70
119: Blanton-----	70	Somewhat limited Filtering capacity Leaching Too acid Slope	0.99  0.45 0.32 0.16	Somewhat limited Filtering capacity Too acid Slope	0.99  0.91 0.16
Lakeland-----	30	Somewhat limited Filtering capacity Droughty Too acid Leaching Slope	0.99  0.71 0.50 0.45 0.16	Somewhat limited Filtering capacity Too acid Droughty Slope	0.99  0.99 0.71 0.16
121: Goldsboro-----	80	Somewhat limited Filtering capacity Depth to saturated zone Too acid Low adsorption	0.99  0.86 0.43 0.40	Somewhat limited Filtering capacity Too acid Depth to saturated zone Low adsorption	0.99  0.99 0.86 0.01
122: Goldsboro-----	78	Somewhat limited Filtering capacity Depth to saturated zone Low adsorption Too acid	0.99  0.86 0.47 0.43	Somewhat limited Filtering capacity Too acid Depth to saturated zone Low adsorption	0.99  0.99 0.86 0.08
123: Blanton-----	60	Very limited Too steep Filtering capacity Leaching Too acid	1.00 0.99 0.45 0.32	Very limited Too steep Filtering capacity Too acid	1.00 0.99 0.91

Soil Survey of Washington County, Florida

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
123: Lakeland-----	33	Very limited Too steep Filtering capacity Droughty Too acid Leaching	1.00 0.99 0.72 0.50 0.45	Very limited Too steep Filtering capacity Too acid Droughty	1.00 0.99 0.99 0.72
127: Goldsboro-----	74	Somewhat limited Filtering capacity Depth to saturated zone Low adsorption Too acid	0.99 0.86 0.58 0.43	Somewhat limited Filtering capacity Too acid Depth to saturated zone Low adsorption	0.99 0.99 0.86 0.34
128: Blanton-----	70	Somewhat limited Filtering capacity Leaching Too acid	0.99 0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99 0.91
Bonneau-----	30	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.43 0.15	Somewhat limited Filtering capacity Too acid	0.99 0.99
129: Blanton-----	75	Somewhat limited Filtering capacity Leaching Too acid	0.99 0.45 0.32	Somewhat limited Filtering capacity Too acid	0.99 0.91
Bonneau-----	25	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.43 0.29	Somewhat limited Filtering capacity Too acid	0.99 0.99

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste 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	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Depth to saturated zone Flooding Too acid Filtering capacity Droughty	1.00 1.00 1.00 0.99 0.23	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 1.00 1.00
Pickney-----	25	Very limited Depth to saturated zone Flooding Too acid Filtering capacity Droughty	1.00 1.00 1.00 0.99 0.01	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 1.00 1.00
Pamlico-----	19	Very limited Ponding Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Flooding Ponding Depth to saturated zone Seepage Too acid	1.00 1.00 1.00 1.00 1.00
4: Gritney-----	86	Very limited Filtering capacity Slow water movement Too acid Too steep for surface application	1.00 1.00 0.85 0.08	Very limited Seepage Too acid	1.00 0.85
7: Bladen-----	60	Very limited Depth to saturated zone Slow water movement Too acid Flooding	1.00 1.00 1.00 0.60	Very limited Flooding Depth to saturated zone Seepage Too acid	1.00 1.00 1.00 1.00

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7: Dunbar-----	25	Very limited Depth to saturated zone Too acid Flooding Low adsorption Slow water movement	1.00 0.99 0.60 0.25 0.22	Very limited Flooding Seepage Depth to saturated zone Too acid Low adsorption	1.00 1.00 1.00 0.99 0.25
9: Albany-----	38	Very limited Filtering capacity Too acid Depth to saturated zone Droughty	1.00 0.99 0.99 0.24	Very limited Seepage Too acid Depth to saturated zone	1.00 0.99 0.99
Chipley-----	20	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.21	Very limited Seepage Too acid Depth to saturated zone	1.00 1.00 0.99
Leon-----	16	Very limited Depth to saturated zone Filtering capacity Too acid	1.00 0.99 0.99	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.99
11: Dothan-----	93	Somewhat limited Too acid Slow water movement Low adsorption Depth to saturated zone	0.99 0.37 0.05 0.02	Very limited Seepage Too acid Low adsorption Depth to saturated zone	1.00 0.99 0.05 0.02
12: Dothan-----	88	Somewhat limited Too acid Slow water movement Too steep for surface application Low adsorption Depth to saturated zone	0.99 0.37 0.08 0.04 0.02	Very limited Seepage Too acid Low adsorption Depth to saturated zone	1.00 0.99 0.04 0.02

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
14: Dothan-----	87	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.99
		Slow water movement	0.37	Low adsorption	0.07
		Low adsorption	0.07	Too steep for surface application	0.06
		Too steep for sprinkler application	0.02	Depth to saturated zone	0.02
18: Fuquay-----	55	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.91
		Too acid	0.91	Too steep for surface application	0.06
		Low adsorption	0.05	Low adsorption	0.05
		Too steep for sprinkler application	0.02		
Dothan-----	25	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.99
		Slow water movement	0.37	Low adsorption	0.07
		Low adsorption	0.07	Too steep for surface application	0.06
		Too steep for sprinkler application	0.02	Depth to saturated zone	0.02
22: Nankin-----	52	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Low adsorption	0.82	Too acid	0.99
		Slow water movement	0.37	Low adsorption	0.82
		Too steep for surface application	0.08		
Cowarts-----	25	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Low adsorption	0.88	Too acid	0.99
		Slow water movement	0.61	Low adsorption	0.88
		Too steep for surface application	0.08	Depth to saturated zone	0.02
		Depth to saturated zone	0.02		

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
23: Nankin-----	57	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.99
		Low adsorption	0.76	Low adsorption	0.76
		Slow water movement	0.37	Too steep for surface application	0.06
		Too steep for sprinkler application	0.02		
Cowarts-----	21	Somewhat limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.99
		Low adsorption	0.91	Low adsorption	0.91
		Slow water movement	0.61	Too steep for surface application	0.06
		Too steep for sprinkler application	0.02	Depth to saturated zone	0.02
29: Dunbar-----	72	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Too acid	0.99	Seepage	1.00
		Flooding	0.60	Depth to saturated zone	1.00
		Low adsorption	0.25	Too acid	0.99
		Slow water movement	0.22	Low adsorption	0.25
35: Lucy-----	45	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Low adsorption	0.14	Low adsorption	0.14
Troup-----	42	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.91	Too acid	0.91
36: Troup-----	45	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too steep for surface application	0.92	Too acid	0.91
		Too acid	0.91	Too steep for surface application	0.06
		Too steep for sprinkler application	0.02		

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
36: Lucy-----	40	Somewhat limited Filtering capacity Too acid Too steep for surface application Low adsorption Too steep for sprinkler application	0.99 0.99 0.92 0.37 0.02	Very limited Seepage Too acid Low adsorption Too steep for surface application	1.00 0.99 0.37 0.06
39: Bonifay-----	50	Very limited Filtering capacity Too acid Slow water movement	1.00 0.91 0.31	Very limited Seepage Too acid	1.00 0.91
Fuquay-----	34	Somewhat limited Filtering capacity Too acid	0.99 0.91	Very limited Seepage Too acid	1.00 0.91
40: Bonifay-----	80	Very limited Filtering capacity Too steep for surface application Too acid Slow water movement Too steep for sprinkler application	1.00 0.92 0.91 0.31 0.02	Very limited Seepage Too acid Too steep for surface application	1.00 0.91 0.06
41: Lucy-----	70	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.99 0.12	Very limited Seepage Too acid Low adsorption	1.00 0.99 0.12
52: Grady-----	85	Very limited Depth to saturated zone Slow water movement Too acid Ponding Low adsorption	1.00 1.00 1.00 1.00 0.44	Very limited Depth to saturated zone Too acid Ponding Seepage Low adsorption	1.00 1.00 1.00 0.62 0.44

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Albany-----	63	Very limited Filtering capacity Too acid Depth to saturated zone Flooding Droughty	1.00 0.99 0.99 0.60 0.16	Very limited Flooding Seepage Too acid Depth to saturated zone	1.00 1.00 0.99 0.99
Ocilla-----	24	Very limited Depth to saturated zone Too acid Flooding	1.00 0.99 0.60	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 1.00 0.99
55: Chipley-----	55	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.19	Very limited Seepage Too acid Depth to saturated zone	1.00 1.00 0.99
Albany-----	27	Very limited Filtering capacity Too acid Depth to saturated zone Droughty	1.00 0.99 0.99 0.16	Very limited Seepage Too acid Depth to saturated zone	1.00 0.99 0.99
Hurricane-----	15	Very limited Too acid Filtering capacity Depth to saturated zone	1.00 0.99 0.99	Very limited Seepage Too acid Depth to saturated zone	1.00 1.00 0.99
56: Albany-----	72	Very limited Filtering capacity Too acid Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 0.99 0.99 0.92 0.02	Very limited Seepage Too acid Depth to saturated zone Too steep for surface application	1.00 0.99 0.99 0.06

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
56: Ocilla-----	16	Very limited Depth to saturated zone Too acid Too steep for surface application Too steep for sprinkler application	1.00  0.99 0.92  0.02	Very limited Seepage Depth to saturated zone Too acid Too steep for surface application	1.00  1.00  0.99 0.06
57: Ocilla-----	70	Very limited Depth to saturated zone Too acid	1.00  0.99	Very limited Seepage Depth to saturated zone Too acid	1.00  1.00 0.99
Leefield-----	18	Somewhat limited Filtering capacity Too acid Depth to saturated zone Slow water movement	0.99  0.99 0.99 0.37	Very limited Seepage Too acid Depth to saturated zone	1.00 0.99 0.99
61: Lakeland-----	74	Very limited Too steep for surface application Filtering capacity Too acid Droughty Too steep for sprinkler application	1.00  0.99 0.99 0.71 0.40	Very limited Seepage Too acid Too steep for surface application	1.00 0.99 0.78
62: Lakeland-----	77	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.73	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
63: Lakeland-----	76	Somewhat limited Filtering capacity Too acid Droughty	0.99  0.99 0.68	Very limited Seepage Too acid	1.00 0.99

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64: Lakeland-----	70	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for surface application	0.92	Too steep for surface application	0.06
		Droughty	0.69		
		Too steep for sprinkler application	0.02		
67: Nankin-----	52	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Low adsorption	0.83	Low adsorption	0.83
		Slow water movement	0.37	Too steep for surface application	0.50
		Too steep for sprinkler application	0.22		
Cowarts-----	28	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Low adsorption	0.94	Low adsorption	0.94
		Slow water movement	0.61	Too steep for surface application	0.50
		Too steep for sprinkler application	0.22	Depth to saturated zone	0.02
Lakeland-----	17	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99	Too steep for surface application	0.50
		Droughty	0.70		
		Too steep for sprinkler application	0.22		

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Nankin-----	50	Very limited Too steep for surface application Too steep for sprinkler application Too acid Low adsorption Slow water movement	1.00  1.00  0.99 0.84 0.37	Very limited Seepage Too steep for surface application Too acid Low adsorption	1.00 1.00  0.99 0.84
Cowarts-----	30	Very limited Too steep for surface application Too steep for sprinkler application Too acid Low adsorption Slow water movement	1.00  1.00  0.99 0.94 0.61	Very limited Seepage Too steep for surface application Too acid Low adsorption Depth to saturated zone	1.00 1.00  0.99 0.94 0.02
Lakeland-----	16	Very limited Too steep for surface application Too steep for sprinkler application Filtering capacity Too acid Droughty	1.00  1.00  0.99 0.99 0.73	Very limited Seepage Too steep for surface application Too acid	1.00 1.00  0.99
71: Lynchburg-----	90	Very limited Depth to saturated zone Filtering capacity Too acid Slow water movement	1.00  0.99  0.99 0.37	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00  0.99
72: Lynchburg-----	88	Very limited Depth to saturated zone Filtering capacity Too acid Slow water movement Too steep for surface application	1.00  0.99  0.99 0.37 0.08	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00  0.99

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
85: Searcy-----	56	Very limited Slow water movement Too acid Depth to saturated zone Too steep for surface application	1.00 0.99 0.95 0.08	Somewhat limited Too acid Depth to saturated zone Seepage	0.99 0.95 0.62
Oktibbeha-----	31	Very limited Slow water movement Too steep for surface application	1.00 0.08	Not limited	
86: Hannon-----	60	Very limited Slow water movement Too steep for surface application Too acid Too steep for sprinkler application	1.00 0.92 0.07 0.02	Somewhat limited Too acid Too steep for surface application	0.07 0.06
Oktibbeha-----	40	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 0.92 0.02	Somewhat limited Too steep for surface application	0.06
87: Clara-----	50	Very limited Ponding Depth to saturated zone Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.99
Plummer-----	30	Very limited Ponding Depth to saturated zone Too acid Filtering capacity	1.00 1.00 1.00 0.99	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 1.00

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
90: Rains-----	56	Very limited Depth to saturated zone Ponding Too acid	1.00 1.00 0.99	Very limited Seepage Depth to saturated zone Ponding Too acid Too level	1.00 1.00 1.00 0.99 0.02
Bayboro-----	40	Very limited Depth to saturated zone Slow water movement Too acid Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Too acid Ponding Too level	1.00 1.00 1.00 1.00 0.02
91: Orangeburg-----	87	Somewhat limited Too acid Low adsorption Too steep for surface application	0.85 0.61 0.08	Very limited Seepage Too acid Low adsorption	1.00 0.85 0.61
96: Orangeburg-----	90	Somewhat limited Too steep for surface application Too acid Low adsorption Too steep for sprinkler application	0.92 0.85 0.69 0.02	Very limited Seepage Too acid Low adsorption Too steep for surface application	1.00 0.85 0.69 0.06
98: Rutlege-----	75	Very limited Ponding Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 1.00 0.99	Very limited Flooding Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 1.00 1.00
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone Filtering capacity Too acid	1.00 0.99 0.99	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.99

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Chipley-----	32	Very limited Too acid Filtering capacity Depth to saturated zone Droughty	1.00 0.99 0.99 0.17	Very limited Seepage Too acid Depth to saturated zone	1.00 1.00 0.99
106: Pantego-----	55	Very limited Ponding Depth to saturated zone Too acid	1.00 1.00 1.00	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 1.00
Clara-----	30	Very limited Ponding Depth to saturated zone Filtering capacity Too acid	1.00 1.00 0.99 0.99	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.99
110: Arents-----	86	Very limited Filtering capacity Too acid Droughty Depth to saturated zone Too steep for surface application	1.00 0.99 0.99 0.99 0.95 0.92	Very limited Seepage Too acid Depth to saturated zone Too steep for surface application	1.00 0.99 0.95 0.06
112: Pottsburg-----	72	Very limited Depth to saturated zone Filtering capacity Too acid Flooding	1.00 0.99 0.99 0.60	Very limited Flooding Seepage Depth to saturated zone Too acid	1.00 1.00 1.00 0.99
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.07	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.07

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
116: Blanton-----	50	Somewhat limited Filtering capacity Too acid	0.99  0.91	Very limited Seepage Too acid	1.00  0.91
Lakeland-----	40	Somewhat limited Filtering capacity Too acid Droughty	0.99  0.99 0.68	Very limited Seepage Too acid	1.00  0.99
117: Blanton-----	55	Somewhat limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	0.99  0.92  0.91 0.02	Very limited Seepage Too acid Too steep for surface application	1.00  0.91  0.06
Lakeland-----	38	Somewhat limited Filtering capacity Too acid Too steep for surface application Droughty Too steep for sprinkler application	0.99  0.99 0.92  0.70 0.02	Very limited Seepage Too acid Too steep for surface application	1.00  0.99  0.06
119: Blanton-----	70	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler application	1.00  0.99  0.91 0.40	Very limited Seepage Too acid Too steep for surface application	1.00  0.91  0.78
Lakeland-----	30	Very limited Too steep for surface application Filtering capacity Too acid Droughty Too steep for sprinkler application	1.00  0.99  0.99 0.71 0.40	Very limited Seepage Too acid Too steep for surface application	1.00  0.99  0.78

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Goldsboro-----	80	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Low adsorption	0.40	Low adsorption	0.40
122: Goldsboro-----	78	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Low adsorption	0.47	Low adsorption	0.47
		Too steep for surface application	0.08		
123: Blanton-----	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.91
		Too acid	0.91		
Lakeland-----	33	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Droughty	0.72		
127: Goldsboro-----	74	Somewhat limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for surface application	0.92	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Low adsorption	0.58
		Low adsorption	0.58	Too steep for surface application	0.06

Soil Survey of Washington County, Florida

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
128: Blanton-----	70	Somewhat limited Filtering capacity Too acid	0.99  0.91	Very limited Seepage Too acid	1.00  0.91
Bonneau-----	30	Somewhat limited Filtering capacity Too acid Low adsorption	0.99  0.99 0.15	Very limited Seepage Too acid Low adsorption	1.00  0.99 0.15
129: Blanton-----	75	Somewhat limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	0.99  0.92  0.91 0.02	Very limited Seepage Too acid Too steep for surface application	1.00  0.91  0.06
Bonneau-----	25	Somewhat limited Filtering capacity Too acid Too steep for surface application Low adsorption Too steep for sprinkler application	0.99  0.99 0.92  0.29 0.02	Very limited Seepage Too acid Low adsorption Too steep for surface application	1.00  0.99 0.29 0.06

Soil Survey of Washington County, Florida

Table 6c.--Agricultural Waste 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	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Flooding Depth to saturated zone Too acid	1.00 1.00 0.42	Very limited Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 0.99
Pickney-----	25	Very limited Flooding Depth to saturated zone Too acid	1.00 1.00 0.21	Very limited Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 0.99
Pamlico-----	19	Very limited Ponding Flooding Depth to saturated zone Slow water movement Too acid	1.00 1.00 1.00 0.62 0.14	Very limited Ponding Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 1.00 0.99
4: Gritney-----	86	Very limited Slow water movement	1.00	Very limited Filtering capacity Slow water movement Too acid Too steep for surface application	1.00 0.96 0.85 0.08
7: Bladen-----	60	Very limited Slow water movement Depth to saturated zone Flooding Too acid	1.00 1.00 0.60 0.31	Very limited Depth to saturated zone Too acid Slow water movement Flooding	1.00 1.00 0.96 0.60
Dunbar-----	25	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Too acid Flooding Low adsorption Slow water movement	1.00 0.99 0.60 0.25 0.15

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9: Albany-----	38	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity	1.00
		Slow water movement	1.00	Too acid Depth to saturated zone	0.99 0.99
Chipley-----	20	Very limited Depth to saturated zone	1.00	Very limited Too acid Filtering capacity	1.00 0.99
				Depth to saturated zone	0.99
Leon-----	16	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Slow water movement	0.62	Filtering capacity Too acid	0.99 0.99
11: Dothan-----	93	Very limited Slow water movement	1.00	Somewhat limited Too acid	0.99
		Depth to saturated zone	0.02	Slow water movement	0.26
				Low adsorption Depth to saturated zone	0.05 0.02
12: Dothan-----	88	Very limited Slow water movement	1.00	Somewhat limited Too acid	0.99
		Depth to saturated zone	0.02	Slow water movement	0.26
				Too steep for surface application	0.08
				Low adsorption Depth to saturated zone	0.04 0.02
14: Dothan-----	87	Very limited Slow water movement	1.00	Somewhat limited Too acid	0.99
		Slope	0.88	Too steep for surface application	0.92
		Depth to saturated zone	0.02	Slow water movement	0.26
				Low adsorption Too steep for sprinkler irrigation	0.07 0.06

Soil Survey of Washington County, Florida

Table 6c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
18: Fuquay-----	55	Very limited Slow water movement Slope	1.00  0.88	Somewhat limited	
				Filtering capacity	0.99
				Too steep for surface application	0.92
				Too acid	0.91
Dothan-----	25	Very limited Slow water movement Slope Depth to saturated zone	1.00  0.88 0.02	Too steep for sprinkler irrigation	0.06
				Low adsorption	0.05
				Somewhat limited	
				Too acid	0.99
				Too steep for surface application	0.92
				Slow water movement	0.26
22: Nankin-----	52	Very limited Slow water movement	1.00	Low adsorption	0.07
				Too steep for sprinkler irrigation	0.06
				Somewhat limited	
				Too acid	0.99
Cowarts-----	25	Very limited Slow water movement Depth to saturated zone	1.00  0.02	Low adsorption	0.82
				Slow water movement	0.26
				Too steep for surface application	0.08
				Somewhat limited	
				Too acid	0.99
23: Nankin-----	57	Very limited Slow water movement Slope	1.00  0.88	Slow water movement	0.43
				Too steep for surface application	0.08
				Depth to saturated zone	0.02
				Somewhat limited	
				Too acid	0.99
				Too steep for surface application	0.92
Low adsorption	0.76				
Slow water movement	0.26				
Too steep for sprinkler irrigation	0.06				

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
23: Cowarts-----	21	Very limited Slow water movement Slope Depth to saturated zone	1.00 0.88 0.02	Somewhat limited Too acid Too steep for surface application Low adsorption Slow water movement Too steep for sprinkler irrigation	0.99 0.92 0.91 0.43 0.06
29: Dunbar-----	72	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Too acid Flooding Low adsorption Slow water movement	1.00 0.99 0.60 0.25 0.15
35: Lucy-----	45	Very limited Slow water movement	1.00	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.99 0.14
Troup-----	42	Very limited Slow water movement	1.00	Somewhat limited Filtering capacity Too acid	0.99 0.91
36: Troup-----	45	Very limited Slow water movement Slope	1.00 0.88	Somewhat limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler irrigation	0.99 0.92 0.91 0.06
Lucy-----	40	Very limited Slow water movement Slope	1.00 0.88	Somewhat limited Filtering capacity Too acid Too steep for surface application Low adsorption Too steep for sprinkler irrigation	0.99 0.99 0.92 0.37 0.06

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39: Bonifay-----	50	Very limited Slow water movement	1.00	Very limited Filtering capacity Too acid Slow water movement	1.00 0.91 0.21
Fuquay-----	34	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Somewhat limited Filtering capacity Too acid	0.99 0.91
40: Bonifay-----	80	Very limited Slow water movement Slope	1.00 0.88	Very limited Filtering capacity Too steep for surface application Too acid Slow water movement Too steep for sprinkler irrigation	1.00 0.92 0.91 0.21 0.06
41: Lucy-----	70	Very limited Slow water movement	1.00	Somewhat limited Filtering capacity Too acid Low adsorption	0.99 0.99 0.12
52: Grady-----	85	Very limited Slow water movement Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.14	Very limited Depth to saturated zone Too acid Ponding Slow water movement Low adsorption	1.00 1.00 1.00 0.96 0.44
54: Albany-----	63	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.60	Very limited Filtering capacity Too acid Depth to saturated zone Flooding	1.00 0.99 0.99 0.60
Ocilla-----	24	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Too acid Flooding	1.00 0.99 0.60

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
55: Chipley-----	55	Very limited Depth to saturated zone	1.00	Very limited Too acid Filtering capacity Depth to saturated zone	1.00 0.99 0.99
Albany-----	27	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Filtering capacity Too acid Depth to saturated zone	1.00 0.99 0.99
Hurricane-----	15	Very limited Depth to saturated zone Slow water movement	1.00 0.32	Very limited Too acid Filtering capacity Depth to saturated zone	1.00 0.99 0.99
56: Albany-----	72	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.88	Very limited Filtering capacity Too acid Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 0.99 0.99 0.92 0.06
Ocilla-----	16	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.88	Very limited Depth to saturated zone Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 0.99 0.92 0.06
57: Ocilla-----	70	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.99

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
57: Leefield-----	18	Very limited Slow water movement Depth to saturated zone	1.00  1.00	Somewhat limited Filtering capacity Too acid Depth to saturated zone Slow water movement	0.99  0.99 0.99 0.26
61: Lakeland-----	74	Very limited Slope	1.00	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler irrigation	1.00  0.99 0.99 0.78
62: Lakeland-----	77	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00  1.00 0.99 0.99
63: Lakeland-----	76	Not limited		Somewhat limited Filtering capacity Too acid	0.99 0.99
64: Lakeland-----	70	Somewhat limited Slope	0.88	Somewhat limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	0.99 0.99 0.92 0.06

Soil Survey of Washington County, Florida

Table 6c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
67: Nankin-----	52	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too acid Low adsorption Too steep for sprinkler irrigation Slow water movement	1.00 0.99 0.83 0.50 0.26
Cowarts-----	28	Very limited Slow water movement Slope Depth to saturated zone	1.00 1.00 0.02	Very limited Too steep for surface application Too acid Low adsorption Too steep for sprinkler irrigation Slow water movement	1.00 0.99 0.94 0.50 0.43
Lakeland-----	17	Very limited Slope	1.00	Very limited Too steep for surface application Filtering capacity Too acid Too steep for sprinkler irrigation	1.00 0.99 0.99 0.50
68: Nankin-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid Low adsorption Slow water movement	1.00 1.00 0.99 0.84 0.26
Cowarts-----	30	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 0.02	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid Low adsorption Slow water movement	1.00 1.00 1.00 0.99 0.94 0.43

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lakeland-----	16	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Filtering capacity Too acid	1.00 1.00 0.99 0.99
71: Lynchburg-----	90	Very limited Slow water movement Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Filtering capacity Too acid Slow water movement	1.00 0.99 0.99 0.26
72: Lynchburg-----	88	Very limited Slow water movement Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Filtering capacity Too acid Slow water movement Too steep for surface application	1.00 0.99 0.99 0.26 0.08
85: Searcy-----	56	Very limited Slow water movement Depth to saturated zone Too acid	1.00 0.95 0.03	Somewhat limited Too acid Slow water movement Depth to saturated zone Too steep for surface application	0.99 0.96 0.95 0.08
Oktibbeha-----	31	Very limited Slow water movement	1.00	Very limited Slow water movement Too steep for surface application	1.00 0.08

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
86: Hannon-----	60	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Slope	0.88	Too steep for surface application	0.92
				Too acid	0.07
				Too steep for sprinkler irrigation	0.06
Oktibbeha-----	40	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00
		Slope	0.88	Too steep for surface application	0.92
				Too steep for sprinkler irrigation	0.06
87: Clara-----	50	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Filtering capacity	0.99
				Too acid	0.99
Plummer-----	30	Very limited Ponding	1.00	Very limited Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.14	Filtering capacity	0.99
90: Rains-----	56	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Too acid	0.99
		Too acid	0.14		
Bayboro-----	40	Very limited Slow water movement	1.00	Very limited Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Ponding	1.00	Ponding	1.00
				Slow water movement	0.96

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
91: Orangeburg-----	87	Very limited Slow water movement	1.00	Somewhat limited Too acid Low adsorption Too steep for surface application	0.85 0.61 0.08
96: Orangeburg-----	90	Very limited Slow water movement Slope	1.00 0.88	Somewhat limited Too steep for surface application Too acid Low adsorption Too steep for sprinkler irrigation	0.92 0.85 0.69 0.06
98: Rutlege-----	75	Very limited Ponding Flooding Depth to saturated zone Too acid Slow water movement	1.00 1.00 1.00 0.42 0.31	Very limited Ponding Depth to saturated zone Flooding Too acid Filtering capacity	1.00 1.00 1.00 1.00 0.99
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone Slow water movement	1.00 0.62	Very limited Depth to saturated zone Filtering capacity Too acid	1.00 0.99 0.99
Chipley-----	32	Very limited Depth to saturated zone	1.00	Very limited Too acid Filtering capacity Depth to saturated zone	1.00 0.99 0.99
106: Pantego-----	55	Very limited Ponding Depth to saturated zone Slow water movement Too acid	1.00 1.00 1.00 0.21	Very limited Ponding Depth to saturated zone Too acid	1.00 1.00 1.00

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
106: Clara-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Filtering capacity Too acid	1.00 1.00 0.99 0.99
110: Arents-----	86	Very limited Depth to saturated zone Slope	1.00 0.88	Very limited Filtering capacity Too acid Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 0.99 0.95 0.92 0.06
112: Pottsburg-----	72	Very limited Depth to saturated zone Slow water movement Flooding Too acid	1.00 1.00 0.60 0.03	Very limited Depth to saturated zone Filtering capacity Too acid Flooding	1.00 0.99 0.99 0.60
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.07
116: Blanton-----	50	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Somewhat limited Filtering capacity Too acid	0.99 0.91
Lakeland-----	40	Not limited		Somewhat limited Filtering capacity Too acid	0.99 0.99

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Blanton-----	55	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	1.00	Too steep for surface application	0.92
		Slope	0.88	Too acid	0.91
				Too steep for sprinkler irrigation	0.06
Lakeland-----	38	Somewhat limited		Somewhat limited	
		Slope	0.88	Filtering capacity	0.99
				Too acid	0.99
				Too steep for surface application	0.92
				Too steep for sprinkler irrigation	0.06
119: Blanton-----	70	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.91
				Too steep for sprinkler irrigation	0.78
Lakeland-----	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Too steep for sprinkler irrigation	0.78
121: Goldsboro-----	80	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.99
		Too acid	0.14	Depth to saturated zone	0.86
				Low adsorption	0.40

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
122: Goldsboro-----	78	Very limited Depth to saturated zone	1.00	Somewhat limited Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.99
		Too acid	0.14	Depth to saturated zone	0.86
				Low adsorption	0.47
				Too steep for surface application	0.08
123: Blanton-----	60	Very limited Slope	1.00	Very limited Too steep for surface	1.00
		Depth to saturated zone	1.00	application	
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.91
Lakeland-----	33	Very limited Slope	1.00	Very limited Too steep for surface	1.00
				application	
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
127: Goldsboro-----	74	Very limited Depth to saturated zone	1.00	Somewhat limited Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.99
		Slope	0.88	Too steep for surface	0.92
		Too acid	0.14	application	
				Depth to saturated zone	0.86
				Low adsorption	0.58
128: Blanton-----	70	Very limited Depth to saturated zone	1.00	Somewhat limited Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.91
Bonneau-----	30	Very limited Depth to saturated zone	1.00	Somewhat limited Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.99
				Low adsorption	0.15

Soil Survey of Washington County, Florida

Table 6C.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
129: Blanton-----	75	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	1.00	Too steep for surface application	0.92
		Slope	0.88	Too acid	0.91
				Too steep for sprinkler irrigation	0.06
Bonneau-----	25	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	1.00	Too acid	0.99
		Slope	0.88	Too steep for surface application	0.92
				Low adsorption	0.29
				Too steep for sprinkler irrigation	0.06

Soil Survey of Washington County, Florida

Table 7.--Forestland Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
2:				
Rutlege-----	Slash pine-----	75	---	---
	Loblolly pine-----	80	---	
	Sweetgum-----	---	---	
Pickney-----	Sweetgum-----	---	---	---
	Bald cypress-----	---	---	
	Water tupelo-----	---	---	
	Blackgum-----	---	---	
	Pond pine-----	---	---	
	Water oak-----	---	---	
Pamlico-----	Pond pine-----	55	---	---
	Bald cypress-----	---	---	
	Water tupelo-----	---	---	
	Sweetbay-----	---	---	
4:				
Gritney-----	Slash pine-----	80	143	Slash pine,
	Loblolly pine-----	80	114	loblolly pine
	Longleaf pine-----	65	72	
7:				
Bladen-----	Slash pine-----	91	172	Slash pine,
	Loblolly pine-----	94	129	loblolly pine
	Sweetgum-----	---	---	
Dunbar-----	Slash pine-----	90	157	Slash pine,
	Loblolly pine-----	90	129	loblolly pine
	Blackgum-----	---	---	
	Sweetgum-----	---	---	
9:				
Albany-----	Loblolly pine-----	95	143	Slash pine
	Longleaf pine-----	80	100	
	Slash pine-----	85	157	
Chipley-----	Slash pine-----	85	157	Slash pine
	Loblolly pine-----	85	129	
	Longleaf pine-----	80	100	
Leon-----	Slash pine-----	70	114	Slash pine
	Longleaf pine-----	65	72	
11:				
Dothan-----	Slash pine-----	92	172	Slash pine,
	Loblolly pine-----	88	129	loblolly pine
	Longleaf pine-----	84	114	
	Hickory-----	---	---	
	Water oak-----	---	---	
12:				
Dothan-----	Slash pine-----	92	172	Slash pine,
	Loblolly pine-----	88	129	loblolly pine
	Longleaf pine-----	84	114	
	Hickory-----	---	---	
	Water oak-----	---	---	

Soil Survey of Washington County, Florida

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
14: Dothan-----	Slash pine-----	92	172	Slash pine, loblolly pine
	Loblolly pine-----	88	129	
	Longleaf pine-----	84	114	
	Hickory-----	---	---	
	Water oak-----	---	---	
18: Fuquay-----	Slash pine-----	93	172	Slash pine, loblolly pine
	Loblolly pine-----	85	114	
	Longleaf pine-----	77	100	
	White oak-----	---	---	
Dothan-----	Slash pine-----	92	172	Slash pine, loblolly pine
	Loblolly pine-----	88	129	
	Longleaf pine-----	84	114	
	Hickory-----	---	---	
	Water oak-----	---	---	
22: Nankin-----	Slash pine-----	80	143	Slash pine, loblolly pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
Cowarts-----	Loblolly pine-----	86	123	Slash pine, loblolly pine
	Slash pine-----	86	155	
	Longleaf pine-----	67	72	
	Hickory-----	---	---	
	Water oak-----	---	---	
23: Nankin-----	Slash pine-----	80	143	Slash pine, loblolly pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
Cowarts-----	Loblolly pine-----	86	123	Slash pine, loblolly pine
	Slash pine-----	86	155	
	Longleaf pine-----	67	72	
	Hickory-----	---	---	
	Water oak-----	---	---	
29: Dunbar-----	Slash pine-----	90	157	Slash pine, loblolly pine
	Loblolly pine-----	90	129	
	Blackgum-----	---	---	
	Sweetgum-----	---	---	
35: Lucy-----	Slash pine-----	80	157	Slash pine, loblolly pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
Troup-----	Slash pine-----	84	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	

Soil Survey of Washington County, Florida

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	
36:				
Troup-----	Slash pine-----	84	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
Lucy-----	Loblolly pine-----	80	114	Slash pine, loblolly pine
	Longleaf pine-----	70	86	
	Slash pine-----	80	157	
39:				
Bonifay-----	Slash pine-----	80	143	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
Fuquay-----	Slash pine-----	93	172	Slash pine, loblolly pine
	Loblolly pine-----	85	114	
	Longleaf pine-----	77	100	
	White oak-----	---	---	
40:				
Bonifay-----	Slash pine-----	80	143	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
41:				
Lucy-----	Slash pine-----	80	157	Slash pine, loblolly pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
52:				
Grady-----	Blackgum-----	68	86	---
	Bald cypress-----	65	86	
	Water oak-----	65	57	
54:				
Albany-----	Slash pine-----	85	157	Slash pine
	Loblolly pine-----	95	143	
	Longleaf pine-----	80	100	
Ocilla-----	Slash pine-----	80	157	Slash pine, loblolly pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	100	
55:				
Chipley-----	Slash pine-----	85	157	Slash pine
	Loblolly pine-----	85	129	
	Longleaf pine-----	80	100	
Albany-----	Slash pine-----	85	157	Slash pine
	Loblolly pine-----	95	143	
	Longleaf pine-----	80	100	
Hurricane-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	90	129	
	Longleaf pine-----	75	86	

Soil Survey of Washington County, Florida

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
56:				
Albany-----	Loblolly pine-----	95	143	Slash pine
	Longleaf pine-----	80	100	
	Slash pine-----	85	157	
Ocilla-----	Loblolly pine-----	80	114	Slash pine, loblolly pine
	Slash pine-----	80	157	
	Longleaf pine-----	70	100	
57:				
Ocilla-----	Loblolly pine-----	80	114	Slash pine, loblolly pine
	Slash pine-----	80	157	
	Longleaf pine-----	70	100	
Leefield-----	Slash pine-----	84	157	Slash pine, loblolly pine
	Loblolly pine-----	84	114	
	Longleaf pine-----	70	86	
	White oak-----	---	---	
61:				
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
62:				
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
63:				
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
64:				
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
67:				
Nankin-----	Loblolly pine-----	80	114	Slash pine, loblolly pine
	Longleaf pine-----	70	86	
	Slash pine-----	80	143	
Cowarts-----	Loblolly pine-----	86	123	Slash pine, loblolly pine
	Slash pine-----	86	155	
	Longleaf pine-----	67	72	
	Hickory-----	---	---	
	Water oak-----	---	---	
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
68:				
Nankin-----	Loblolly pine-----	80	114	Slash pine, loblolly pine
	Longleaf pine-----	70	86	
	Slash pine-----	80	143	

Soil Survey of Washington County, Florida

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	
68: Cowarts-----	Loblolly pine-----	86	123	Slash pine, loblolly pine
	Slash pine-----	86	155	
	Longleaf pine-----	67	72	
	Hickory-----	---	---	
	Water oak-----	---	---	
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
71: Lynchburg-----	Loblolly pine-----	86	129	Loblolly pine, slash pine
	Longleaf pine-----	74	86	
	Southern red oak----	---	---	
	White oak-----	---	---	
72: Lynchburg-----	Loblolly pine-----	86	129	Loblolly pine, slash pine
	Longleaf pine-----	74	86	
	Southern red oak----	---	---	
	White oak-----	---	---	
85: Searcy-----	Loblolly pine-----	105	172	Loblolly pine
	Shortleaf pine-----	95	---	
	Water oak-----	---	---	
	Sweetgum-----	---	---	
Oktibbeha-----	Loblolly pine-----	90	131	Loblolly pine
	Shortleaf pine-----	80	---	
86: Hannon-----	Loblolly pine-----	80	114	Loblolly pine
	Shortleaf pine-----	70	86	
	Eastern redcedar----	---	---	
Oktibbeha-----	Loblolly pine-----	90	131	Loblolly pine
	Shortleaf pine-----	80	---	
87: Clara-----	Slash pine-----	85	157	Slash pine
	Longleaf pine-----	69	---	
	Bald cypress-----	---	---	
	Pond pine-----	---	---	
	Water oak-----	---	---	
Plummer-----	Slash pine-----	88	157	Slash pine
	Longleaf pine-----	70	86	
	Bald cypress-----	---	---	
90: Rains-----	Loblolly pine-----	94	143	---
	Slash pine-----	91	---	
	Sweetgum-----	---	---	
Bayboro-----	Loblolly pine-----	95	114	---
	Sweetgum-----	---	---	
	Swamp tupelo-----	---	---	

Soil Survey of Washington County, Florida

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	
91: Orangeburg-----	Slash pine-----	90	157	Loblolly pine, slash pine
	Loblolly pine-----	90	114	
	Shortleaf pine-----	80	---	
96: Orangeburg-----	Slash pine-----	90	157	Loblolly pine, slash pine
	Loblolly pine-----	90	114	
	Shortleaf pine-----	80	---	
98: Rutlege-----	Sweetgum-----	---	---	---
	Bald cypress-----	---	---	
	Pin oak-----	---	---	
99: Water.				
100: Leon-----	Slash pine-----	70	114	Slash pine
	Longleaf pine-----	65	72	
Chipley-----	Slash pine-----	85	157	Slash pine
	Longleaf pine-----	80	100	
106: Pantego-----	Pondcypress-----	---	---	---
	Bald cypress-----	---	---	
	Pond pine-----	---	---	
	Red maple-----	---	---	
	Sweetbay-----	---	---	
	Water tupelo-----	---	---	
	Blackgum-----	---	---	
Clara-----	Slash pine-----	85	157	Slash pine
	Longleaf pine-----	69	---	
	Bald cypress-----	---	---	
	Pond pine-----	---	---	
	Water oak-----	---	---	
110: Arents.				
112: Pottsburg-----	Slash pine-----	70	114	Slash pine
	Loblolly pine-----	70	86	
	Longleaf pine-----	60	57	
	Water oak-----	---	---	
	Live oak-----	---	---	
113: Pits. Udorthents.				

Soil Survey of Washington County, Florida

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
116: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
117: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
119: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Lakeland-----	Slash pine-----	80	143	Sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
121: Goldsboro-----	Slash pine-----	93	172	Loblolly pine, slash pine
	Loblolly pine-----	90	129	
	Longleaf pine-----	77	86	
	Sweetgum-----	---	---	
	Southern red oak----	---	---	
	White oak-----	---	---	
	Water oak-----	---	---	
122: Goldsboro-----	Slash pine-----	93	172	Loblolly pine, slash pine
	Loblolly pine-----	90	129	
	Longleaf pine-----	77	86	
	Sweetgum-----	---	---	
	Southern red oak----	---	---	
	White oak-----	---	---	
	Water oak-----	---	---	

Soil Survey of Washington County, Florida

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
123: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Lakeland-----	Slash pine-----	80	143	sand pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	65	72	
127: Goldsboro-----	Slash pine-----	93	172	Loblolly pine, slash pine
	Loblolly pine-----	90	129	
	Longleaf pine-----	77	86	
	Sweetgum-----	---	---	
	Southern red oak-----	---	---	
	White oak-----	---	---	
	Water oak-----	---	---	
128: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Bonneau-----	Loblolly pine-----	95	143	Slash pine, loblolly pine
	Longleaf pine-----	75	86	
	Hickory-----	---	---	
	White oak-----	---	---	
129: Blanton-----	Slash pine-----	90	157	Slash pine, longleaf pine
	Loblolly pine-----	80	114	
	Longleaf pine-----	70	86	
	Bluejack oak-----	---	---	
	Turkey oak-----	---	---	
	Live oak-----	---	---	
	American beech-----	---	---	
Bonneau-----	Loblolly pine-----	95	143	Slash pine, loblolly pine
	Longleaf pine-----	75	86	
	Hickory-----	---	---	
	White oak-----	---	---	

Soil Survey of Washington County, Florida

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	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Severe Flooding Sandiness	1.00 0.50	Poorly suited Flooding Wetness Sandiness	1.00 1.00 1.00 0.50	Moderate Low strength	0.50
Pickney-----	25	Severe Flooding	1.00	Poorly suited Flooding Wetness	1.00 1.00	Moderate Low strength	0.50
Pamlico-----	19	Severe Flooding Sandiness	1.00 0.50	Poorly suited Ponding Flooding Low strength Wetness	1.00 1.00 1.00 1.00	Severe Low strength	1.00
4: Gritney-----	86	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
7: Bladen-----	60	Severe Flooding Low strength	1.00 0.50	Poorly suited Flooding Wetness	1.00 1.00	Moderate Low strength	0.50
Dunbar-----	25	Severe Flooding	1.00	Poorly suited Flooding Wetness	1.00 0.50	Moderate Low strength	0.50
9: Albany-----	38	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Chipley-----	20	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Leon-----	16	Moderate Sandiness	0.50	Moderately suited Wetness Sandiness	0.50 0.50	Moderate Low strength	0.50
11: Dothan-----	93	Slight		Well suited		Moderate Low strength	0.50
12: Dothan-----	88	Slight		Well suited		Moderate Low strength	0.50
14: Dothan-----	87	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
18: Fuquay-----	55	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
Dothan-----	25	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
22: Nankin-----	52	Slight		Well suited		Moderate Low strength	0.50
Cowarts-----	25	Slight		Well suited		Moderate Low strength	0.50
23: Nankin-----	57	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
Cowarts-----	21	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
29: Dunbar-----	72	Severe Flooding	1.00	Poorly suited Flooding Wetness	1.00 0.50	Moderate Low strength	0.50
35: Lucy-----	45	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Troup-----	42	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
36: Troup-----	45	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
Lucy-----	40	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
39: Bonifay-----	50	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Fuquay-----	34	Slight		Well suited		Moderate Low strength	0.50
40: Bonifay-----	80	Slight		Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
41: Lucy-----	70	Slight		Moderately suited Sandiness	0.50	Moderate Low strength	0.50

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52: Grady-----	85	Moderate Low strength Stickiness/slope	0.50 0.50	Poorly suited Ponding Wetness Low strength	1.00 1.00 0.50	Severe Low strength	1.00
54: Albany-----	63	Severe Flooding Sandiness	1.00 0.50	Poorly suited Flooding Sandiness	1.00 0.50	Moderate Low strength	0.50
Ocilla-----	24	Severe Flooding Sandiness	1.00 0.50	Poorly suited Flooding Sandiness Wetness	1.00 0.50 0.50	Moderate Low strength	0.50
55: Chipley-----	55	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Albany-----	27	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Hurricane-----	15	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
56: Albany-----	72	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
Ocilla-----	16	Moderate Sandiness	0.50	Moderately suited Sandiness Slope Wetness	0.50 0.50 0.50	Moderate Low strength	0.50
57: Ocilla-----	70	Moderate Sandiness	0.50	Moderately suited Sandiness Wetness	0.50 0.50	Moderate Low strength	0.50
Leeffield-----	18	Slight		Well suited		Moderate Low strength	0.50
61: Lakeland-----	74	Moderate Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
62: Lakeland-----	77	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
63: Lakeland-----	76	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64: Lakeland-----	70	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
67: Nankin-----	52	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
Cowarts-----	28	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
Lakeland-----	17	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
68: Nankin-----	50	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Cowarts-----	30	Moderate Slope	0.50	Poorly suited Slope	1.00	Moderate Low strength	0.50
Lakeland-----	16	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
71: Lynchburg-----	90	Slight		Moderately suited Wetness	0.50	Moderate Low strength	0.50
72: Lynchburg-----	88	Slight		Moderately suited Wetness	0.50	Moderate Low strength	0.50
85: Searcy-----	56	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
Oktibbeha-----	31	Moderate Stickiness/slope Low strength	0.50 0.50	Moderately suited Low strength Stickiness; high plasticity index	0.50 0.50	Severe Low strength	1.00
86: Hannon-----	60	Slight		Moderately suited Low strength Slope	0.50 0.50	Severe Low strength	1.00
Oktibbeha-----	40	Moderate Stickiness/slope Low strength	0.50 0.50	Moderately suited Stickiness; high plasticity index Low strength Slope	0.50 0.50 0.50	Severe Low strength	1.00

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Clara-----	50	Severe Wetness Sandiness	1.00 0.50	Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50	Moderate Wetness Low strength	0.50 0.50
Plummer-----	30	Moderate Sandiness	0.50	Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50	Moderate Low strength	0.50
90: Rains-----	56	Slight		Poorly suited Ponding Wetness	1.00 1.00	Moderate Low strength	0.50
Bayboro-----	40	Moderate Low strength	0.50	Poorly suited Ponding Wetness Low strength	1.00 1.00 0.50	Severe Low strength	1.00
91: Orangeburg-----	87	Slight		Well suited		Moderate Low strength	0.50
96: Orangeburg-----	90	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
98: Rutlege-----	75	Severe Flooding Wetness	1.00 1.00	Poorly suited Ponding Flooding Wetness	1.00 1.00 1.00	Moderate Wetness Low strength	0.50 0.50
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Moderate Sandiness	0.50	Moderately suited Wetness Sandiness	0.50 0.50	Moderate Low strength	0.50
Chipley-----	32	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
106: Pantego-----	55	Severe Wetness	1.00	Poorly suited Ponding Wetness	1.00 1.00	Moderate Wetness Low strength	0.50 0.50
Clara-----	30	Severe Wetness Sandiness	1.00 0.50	Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50	Moderate Wetness Low strength	0.50 0.50

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
110: Arents-----	86	Moderate Sandiness	0.50	Moderately suited Sandiness Slope Stickiness; high plasticity index	0.50 0.50 0.50	Moderate Low strength	0.50
112: Pottsburg-----	72	Severe Flooding Sandiness	1.00 0.50	Poorly suited Flooding Wetness Sandiness	1.00 1.00 0.50	Moderate Low strength	0.50
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Moderate Slope	0.50	Poorly suited Slope Low strength Stickiness; high plasticity index	1.00 0.50 0.50	Severe Low strength	1.00
116: Blanton-----	50	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Lakeland-----	40	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
117: Blanton-----	55	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
Lakeland-----	38	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
119: Blanton-----	70	Moderate Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
Lakeland-----	30	Moderate Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderate Low strength	0.50
121: Goldsboro-----	80	Slight		Well suited		Moderate Low strength	0.50
122: Goldsboro-----	78	Slight		Well suited		Moderate Low strength	0.50
123: Blanton-----	60	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50

Soil Survey of Washington County, Florida

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123: Lakeland-----	33	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Sandiness	1.00 0.50	Moderate Low strength	0.50
127: Goldsboro-----	74	Slight		Moderately suited Slope	0.50	Moderate Low strength	0.50
128: Blanton-----	70	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
Bonneau-----	30	Moderate Sandiness	0.50	Moderately suited Sandiness	0.50	Moderate Low strength	0.50
129: Blanton-----	75	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50
Bonneau-----	25	Moderate Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderate Low strength	0.50

Soil Survey of Washington County, Florida

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	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Slight		Slight		Poorly suited Flooding Wetness Sandiness	1.00 1.00 0.50
Pickney-----	25	Slight		Slight		Poorly suited Flooding Wetness	1.00 1.00
Pamlico-----	19	Slight		Slight		Poorly suited Ponding Flooding Low strength Wetness	1.00 1.00 1.00 1.00
4: Gritney-----	86	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
7: Bladen-----	60	Slight		Slight		Poorly suited Flooding Wetness	1.00 1.00
Dunbar-----	25	Slight		Slight		Poorly suited Flooding Wetness	1.00 0.50
9: Albany-----	38	Slight		Slight		Moderately suited Sandiness	0.50
Chipley-----	20	Slight		Slight		Moderately suited Sandiness	0.50
Leon-----	16	Slight		Slight		Moderately suited Wetness Sandiness	0.50 0.50
11: Dothan-----	93	Slight		Slight		Well suited	
12: Dothan-----	88	Slight		Slight		Well suited	
14: Dothan-----	87	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
18: Fuquay-----	55	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Dothan-----	25	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Soil Survey of Washington County, Florida

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
22: Nankin-----	52	Slight		Moderate Slope/erodibility	0.50	Well suited	
Cowarts-----	25	Slight		Slight		Well suited	
23: Nankin-----	57	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Cowarts-----	21	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
29: Dunbar-----	72	Slight		Slight		Poorly suited Flooding Wetness	1.00 0.50
35: Lucy-----	45	Slight		Slight		Moderately suited Sandiness	0.50
Troup-----	42	Slight		Slight		Moderately suited Sandiness	0.50
36: Troup-----	45	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
Lucy-----	40	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
39: Bonifay-----	50	Slight		Slight		Moderately suited Sandiness	0.50
Fuquay-----	34	Slight		Slight		Well suited	
40: Bonifay-----	80	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
41: Lucy-----	70	Slight		Slight		Moderately suited Sandiness	0.50
52: Grady-----	85	Slight		Slight		Poorly suited Ponding Wetness Low strength	1.00 1.00 0.50
54: Albany-----	63	Slight		Slight		Poorly suited Flooding Sandiness	1.00 0.50

Soil Survey of Washington County, Florida

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54: Ocilla-----	24	Slight		Slight		Poorly suited Flooding Sandiness Wetness	1.00 0.50 0.50
55: Chipley-----	55	Slight		Slight		Moderately suited Sandiness	0.50
Albany-----	27	Slight		Slight		Moderately suited Sandiness	0.50
Hurricane-----	15	Slight		Slight		Moderately suited Sandiness	0.50
56: Albany-----	72	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
Ocilla-----	16	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope Wetness	0.50 0.50 0.50
57: Ocilla-----	70	Slight		Slight		Moderately suited Sandiness Wetness	0.50 0.50
Leefield-----	18	Slight		Slight		Well suited	
61: Lakeland-----	74	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness	0.50 0.50
62: Lakeland-----	77	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
63: Lakeland-----	76	Slight		Slight		Moderately suited Sandiness	0.50
64: Lakeland-----	70	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
67: Nankin-----	52	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Cowarts-----	28	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Soil Survey of Washington County, Florida

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67: Lakeland-----	17	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
68: Nankin-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Cowarts-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Lakeland-----	16	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
71: Lynchburg-----	90	Slight		Slight		Moderately suited Wetness	0.50
72: Lynchburg-----	88	Slight		Slight		Moderately suited Wetness	0.50
85: Searcy-----	56	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
Oktibbeha-----	31	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Stickiness; high plasticity index	0.50 0.50
86: Hannon-----	60	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope	0.50 0.50
Oktibbeha-----	40	Slight		Moderate Slope/erodibility	0.50	Moderately suited Stickiness; high plasticity index Low strength Slope	0.50 0.50 0.50
87: Clara-----	50	Slight		Slight		Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50
Plummer-----	30	Slight		Slight		Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50
90: Rains-----	56	Slight		Slight		Poorly suited Ponding Wetness	1.00 1.00

Soil Survey of Washington County, Florida

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90: Bayboro-----	40	Slight		Slight		Poorly suited Ponding Wetness Low strength	1.00 1.00 0.50
91: Orangeburg-----	87	Slight		Slight		Well suited	
96: Orangeburg-----	90	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
98: Rutlege-----	75	Slight		Slight		Poorly suited Ponding Flooding Wetness	1.00 1.00 1.00
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Slight		Slight		Moderately suited Wetness Sandiness	0.50 0.50
Chipley-----	32	Slight		Slight		Moderately suited Sandiness	0.50
106: Pantego-----	55	Slight		Slight		Poorly suited Ponding Wetness	1.00 1.00
Clara-----	30	Slight		Slight		Poorly suited Ponding Wetness Sandiness	1.00 1.00 0.50
110: Arents-----	86	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope Stickiness; high plasticity index	0.50 0.50 0.50
112: Pottsburg-----	72	Slight		Slight		Poorly suited Flooding Wetness Sandiness	1.00 1.00 0.50
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Stickiness; high plasticity index	1.00 0.50 0.50

Soil Survey of Washington County, Florida

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Blanton-----	50	Slight		Slight		Moderately suited Sandiness	0.50
Lakeland-----	40	Slight		Slight		Moderately suited Sandiness	0.50
117: Blanton-----	55	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
Lakeland-----	38	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
119: Blanton-----	70	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness	0.50 0.50
Lakeland-----	30	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope Sandiness	0.50 0.50
121: Goldsboro-----	80	Slight		Slight		Well suited	
122: Goldsboro-----	78	Slight		Slight		Well suited	
123: Blanton-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
Lakeland-----	33	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Sandiness	1.00 0.50
127: Goldsboro-----	74	Slight		Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
128: Blanton-----	70	Slight		Slight		Moderately suited Sandiness	0.50
Bonneau-----	30	Slight		Slight		Moderately suited Sandiness	0.50
129: Blanton-----	75	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50
Bonneau-----	25	Slight		Moderate Slope/erodibility	0.50	Moderately suited Sandiness Slope	0.50 0.50

Soil Survey of Washington County, Florida

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	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Pickney-----	25	Well suited		Well suited		Well suited	
Pamlico-----	19	Well suited		Well suited		Poorly suited Low strength	1.00
4: Gritney-----	86	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index	0.75	Moderately suited Low strength	0.50
7: Bladen-----	60	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index	0.75	Well suited	
Dunbar-----	25	Well suited		Well suited		Well suited	
9: Albany-----	38	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Chipley-----	20	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Leon-----	16	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
11: Dothan-----	93	Well suited		Well suited		Well suited	
12: Dothan-----	88	Well suited		Well suited		Well suited	
14: Dothan-----	87	Well suited		Moderately suited Slope	0.50	Well suited	
18: Fuquay-----	55	Well suited		Moderately suited Slope	0.50	Well suited	
Dothan-----	25	Well suited		Moderately suited Slope	0.50	Well suited	
22: Nankin-----	52	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Well suited	
Cowarts-----	25	Well suited		Well suited		Well suited	

Soil Survey of Washington County, Florida

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23: Nankin-----	57	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Well suited	
Cowarts-----	21	Well suited		Moderately suited Slope	0.50	Well suited	
29: Dunbar-----	72	Well suited		Well suited		Well suited	
35: Lucy-----	45	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Troup-----	42	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
36: Troup-----	45	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
Lucy-----	40	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
39: Bonifay-----	50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Fuquay-----	34	Well suited		Well suited		Well suited	
40: Bonifay-----	80	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
41: Lucy-----	70	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
52: Grady-----	85	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Low strength	0.50
54: Albany-----	63	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Ocilla-----	24	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
55: Chipley-----	55	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Albany-----	27	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50

Soil Survey of Washington County, Florida

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Hurricane-----	15	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
56: Albany-----	72	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
Ocilla-----	16	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
57: Ocilla-----	70	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Leefield-----	18	Well suited		Well suited		Well suited	
61: Lakeland-----	74	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
62: Lakeland-----	77	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness	1.00 0.50	Moderately suited Slope Sandiness	0.50 0.50
63: Lakeland-----	76	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
64: Lakeland-----	70	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
67: Nankin-----	52	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Well suited	
Cowarts-----	28	Well suited		Moderately suited Slope	0.50	Well suited	
Lakeland-----	17	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
68: Nankin-----	50	Moderately suited Stickiness; high plasticity index	0.50	Unsuited Slope Stickiness; high plasticity index	1.00 0.50	Moderately suited Slope	0.50
Cowarts-----	30	Well suited		Unsuited Slope	1.00	Moderately suited Slope	0.50

Soil Survey of Washington County, Florida

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lakeland-----	16	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness	1.00 0.50	Moderately suited Slope Sandiness	0.50 0.50
71: Lynchburg-----	90	Well suited		Well suited		Well suited	
72: Lynchburg-----	88	Well suited		Well suited		Well suited	
85: Searcy-----	56	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Low strength	0.50
Oktoberbeha-----	31	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index	0.75	Moderately suited Low strength Stickiness; high plasticity index	0.50 0.50
86: Hannon-----	60	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	Moderately suited Low strength	0.50
Oktoberbeha-----	40	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	Moderately suited Low strength Stickiness; high plasticity index	0.50 0.50
87: Clara-----	50	Moderately suited Wetness Sandiness	0.50 0.50	Poorly suited Wetness Sandiness	0.75 0.50	Poorly suited Wetness Sandiness	1.00 0.50
Plummer-----	30	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
90: Rains-----	56	Well suited		Well suited		Well suited	
Bayboro-----	40	Well suited		Well suited		Moderately suited Low strength	0.50
91: Orangeburg-----	87	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Well suited	
96: Orangeburg-----	90	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Well suited	
98: Rutlege-----	75	Moderately suited Wetness	0.50	Poorly suited Wetness	0.75	Poorly suited Wetness	1.00

Soil Survey of Washington County, Florida

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Chipley-----	32	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
106: Pantego-----	55	Poorly suited Wetness	0.75	Poorly suited Wetness	0.75	Poorly suited Wetness	1.00
Clara-----	30	Moderately suited Wetness Sandiness	0.50 0.50	Poorly suited Wetness Sandiness	0.75 0.50	Poorly suited Wetness Sandiness	1.00 0.50
110: Arents-----	86	Moderately suited Sandiness	0.50	Moderately suited Sandiness Slope	0.50 0.50	Moderately suited Sandiness Stickiness; high plasticity index	0.50 0.50
112: Pottsburg-----	72	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Well suited		Moderately suited Slope	0.50	Moderately suited Low strength Stickiness; high plasticity index	0.50 0.50
116: Blanton-----	50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Lakeland-----	40	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
117: Blanton-----	55	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
Lakeland-----	38	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
119: Blanton-----	70	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
Lakeland-----	30	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50

Soil Survey of Washington County, Florida

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Goldsboro-----	80	Well suited		Well suited		Well suited	
122: Goldsboro-----	78	Well suited		Well suited		Well suited	
123: Blanton-----	60	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness	1.00 0.50	Moderately suited Slope Sandiness	0.50 0.50
Lakeland-----	33	Moderately suited Sandiness	0.50	Unsuited Slope Sandiness	1.00 0.50	Moderately suited Slope Sandiness	0.50 0.50
127: Goldsboro-----	74	Well suited		Moderately suited Slope	0.50	Well suited	
128: Blanton-----	70	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
Bonneau-----	30	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50	Moderately suited Sandiness	0.50
129: Blanton-----	75	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50
Bonneau-----	25	Moderately suited Sandiness	0.50	Moderately suited Slope Sandiness	0.50 0.50	Moderately suited Sandiness	0.50

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Table 8d.--Forestland Management (Part 4)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2:					
Rutlege-----	40	Well suited		Well suited	
Pickney-----	25	Well suited		Well suited	
Pamlico-----	19	Well suited		Well suited	
4:					
Gritney-----	86	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
7:					
Bladen-----	60	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Dunbar-----	25	Well suited		Well suited	
9:					
Albany-----	38	Well suited		Well suited	
Chipley-----	20	Well suited		Well suited	
Leon-----	16	Well suited		Well suited	
11:					
Dothan-----	93	Well suited		Well suited	
12:					
Dothan-----	88	Well suited		Well suited	
14:					
Dothan-----	87	Well suited		Well suited	
18:					
Fuquay-----	55	Well suited		Well suited	
Dothan-----	25	Well suited		Well suited	
22:					
Nankin-----	52	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Cowarts-----	25	Well suited		Well suited	
23:					
Nankin-----	57	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Cowarts-----	21	Well suited		Well suited	

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Table 8d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29: Dunbar-----	72	Well suited		Well suited	
35: Lucy-----	45	Well suited		Well suited	
Troup-----	42	Well suited		Well suited	
36: Troup-----	45	Well suited		Well suited	
Lucy-----	40	Well suited		Well suited	
39: Bonifay-----	50	Well suited		Well suited	
Fuquay-----	34	Well suited		Well suited	
40: Bonifay-----	80	Well suited		Well suited	
41: Lucy-----	70	Well suited		Well suited	
52: Grady-----	85	Well suited		Well suited	
54: Albany-----	63	Well suited		Well suited	
Ocilla-----	24	Well suited		Well suited	
55: Chipley-----	55	Well suited		Well suited	
Albany-----	27	Well suited		Well suited	
Hurricane-----	15	Well suited		Well suited	
56: Albany-----	72	Well suited		Well suited	
Ocilla-----	16	Well suited		Well suited	
57: Ocilla-----	70	Well suited		Well suited	
Leefield-----	18	Well suited		Well suited	
61: Lakeland-----	74	Well suited		Well suited	
62: Lakeland-----	77	Poorly suited Slope	0.50	Poorly suited Slope	0.50
63: Lakeland-----	76	Well suited		Well suited	

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Table 8d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64: Lakeland-----	70	Well suited		Well suited	
67: Nankin-----	52	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Cowarts-----	28	Well suited		Well suited	
Lakeland-----	17	Well suited		Well suited	
68: Nankin-----	50	Poorly suited Slope Stickiness; high plasticity index	0.50 0.50	Poorly suited Slope	0.50
Cowarts-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lakeland-----	16	Poorly suited Slope	0.50	Poorly suited Slope	0.50
71: Lynchburg-----	90	Well suited		Well suited	
72: Lynchburg-----	88	Well suited		Well suited	
85: Searcy-----	56	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Oktibbeha-----	31	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
86: Hannon-----	60	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
Oktibbeha-----	40	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
87: Clara-----	50	Poorly suited Wetness	0.50	Unsuited Wetness	1.00
Plummer-----	30	Well suited		Well suited	
90: Rains-----	56	Well suited		Well suited	
Bayboro-----	40	Well suited		Well suited	

Soil Survey of Washington County, Florida

Table 8d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
91: Orangeburg-----	87	Well suited		Well suited	
96: Orangeburg-----	90	Well suited		Well suited	
98: Rutlege-----	75	Poorly suited Wetness	0.50	Unsuited Wetness	1.00
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Well suited		Well suited	
Chipley-----	32	Well suited		Well suited	
106: Pantego-----	55	Poorly suited Wetness	0.75	Unsuited Wetness	1.00
Clara-----	30	Poorly suited Wetness	0.50	Unsuited Wetness	1.00
110: Arents-----	86	Well suited		Well suited	
112: Pottsburg-----	72	Well suited		Well suited	
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Poorly suited Slope	0.50	Poorly suited Slope	0.50
116: Blanton-----	50	Well suited		Well suited	
Lakeland-----	40	Well suited		Well suited	
117: Blanton-----	55	Well suited		Well suited	
Lakeland-----	38	Well suited		Well suited	
119: Blanton-----	70	Well suited		Well suited	
Lakeland-----	30	Well suited		Well suited	
121: Goldsboro-----	80	Well suited		Well suited	
122: Goldsboro-----	78	Well suited		Well suited	

Soil Survey of Washington County, Florida

Table 8d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
123: Blanton-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lakeland-----	33	Poorly suited Slope	0.50	Poorly suited Slope	0.50
127: Goldsboro-----	74	Well suited		Well suited	
128: Blanton-----	70	Well suited		Well suited	
Bonneau-----	30	Well suited		Well suited	
129: Blanton-----	75	Well suited		Well suited	
Bonneau-----	25	Well suited		Well suited	

Soil Survey of Washington County, Florida

Table 8e.--Forestland Management (Part 5)

[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. The criteria for rating potential for seedling mortality are specific to Florida. The primary difference between the ratings in this table and the standard national ratings is in the way the limits are evaluated for available water capacity (in the upper 20 inches) of soils with sandy surface layers that are moderately well drained to excessively drained. The ratings in this table more accurately reflect local conditions than the national ratings. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Moderate Texture/rock fragments	0.50	High Wetness Droughty	1.00 0.50
Pickney-----	25	Moderate Texture/rock fragments	0.50	High Wetness Droughty	1.00 0.50
Pamlico-----	19	Low		High Wetness	1.00
4: Gritney-----	86	High Texture/rock fragments	1.00	Low	
7: Bladen-----	60	Low Texture/rock fragments	0.10	High Wetness	1.00
Dunbar-----	25	Moderate Texture/rock fragments	0.50	High Wetness	1.00
9: Albany-----	38	High Texture/surface depth/rock fragments	1.00	Low	
Chipley-----	20	Moderate Texture/rock fragments	0.50	Low	
Leon-----	16	High Texture/surface depth/rock fragments	1.00	High Wetness	1.00
11: Dothan-----	93	High Texture/rock fragments	1.00	Low	

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Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12: Dothan-----	88	High Texture/rock fragments	1.00	Moderate Droughty	0.50
14: Dothan-----	87	High Texture/rock fragments	1.00	Moderate Droughty	0.50
18: Fuquay-----	55	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
Dothan-----	25	High Texture/rock fragments	1.00	Moderate Droughty	0.50
22: Nankin-----	52	Moderate Texture/rock fragments	0.50	Low	
Cowarts-----	25	High Texture/rock fragments	1.00	Low	
23: Nankin-----	57	High Texture/surface depth/rock fragments	1.00	Low	
Cowarts-----	21	High Texture/surface depth/rock fragments	1.00	Low	
29: Dunbar-----	72	Moderate Texture/rock fragments	0.50	High Wetness	1.00
35: Lucy-----	45	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Troup-----	42	High Texture/rock fragments	1.00	Moderate Droughty	0.50
36: Troup-----	45	High Texture/rock fragments	1.00	Moderate Droughty	0.50

Soil Survey of Washington County, Florida

Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
36: Lucy-----	40	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
39: Bonifay-----	50	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Fuquay-----	34	High Texture/rock fragments	1.00	Moderate Droughty	0.50
40: Bonifay-----	80	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
41: Lucy-----	70	High Texture/rock fragments	1.00	Moderate Droughty	0.50
52: Grady-----	85	Low Texture/rock fragments	0.10	High Wetness	1.00
54: Albany-----	63	High Texture/surface depth/rock fragments	1.00	Low	
Ocilla-----	24	Moderate Texture/rock fragments	0.50	Low	
55: Chipley-----	55	Moderate Texture/rock fragments	0.50	Low	
Albany-----	27	High Texture/surface depth/rock fragments	1.00	Low	
Hurricane-----	15	High Texture/rock fragments	1.00	Low	
56: Albany-----	72	High Texture/surface depth/rock fragments	1.00	Low	

Soil Survey of Washington County, Florida

Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
56: Ocilla-----	16	High Texture/surface depth/rock fragments	1.00	Low	
57: Ocilla-----	70	Moderate Texture/rock fragments	0.50	Low	
Leefield-----	18	High Texture/rock fragments	1.00	Low	
61: Lakeland-----	74	High Texture/rock fragments	1.00	Moderate Droughty	0.50
62: Lakeland-----	77	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
63: Lakeland-----	76	High Texture/rock fragments	1.00	Moderate Droughty	0.50
64: Lakeland-----	70	High Texture/rock fragments	1.00	Moderate Droughty	0.50
67: Nankin-----	52	High Texture/surface depth/rock fragments	1.00	Low	
Cowarts-----	28	High Texture/surface depth/rock fragments	1.00	Low	
Lakeland-----	17	High Texture/rock fragments	1.00	Moderate Droughty	0.50
68: Nankin-----	50	High Texture/surface depth/rock fragments	1.00	Low	
Cowarts-----	30	High Texture/surface depth/rock fragments	1.00	Low	

Soil Survey of Washington County, Florida

Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lakeland-----	16	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
71: Lynchburg-----	90	High Texture/rock fragments	1.00	High Wetness	1.00
72: Lynchburg-----	88	High Texture/rock fragments	1.00	High Wetness	1.00
85: Searcy-----	56	Moderate Texture/surface depth/rock fragments	0.50	Low	
Oktribbeha-----	31	Moderate Texture/surface depth/rock fragments	0.50	Low	
86: Hannon-----	60	Low		Moderate Droughty	0.50
Oktribbeha-----	40	Moderate Texture/surface depth/rock fragments	0.50	Low	
87: Clara-----	50	High Texture/rock fragments	1.00	High Wetness	1.00
Plummer-----	30	High Texture/surface depth/rock fragments	1.00	High Wetness	1.00
90: Rains-----	56	Moderate Texture/rock fragments	0.50	High Wetness	1.00
Bayboro-----	40	Low Texture/rock fragments	0.10	High Wetness	1.00
91: Orangeburg-----	87	High Texture/rock fragments	1.00	Moderate Droughty	0.50

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Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
96: Orangeburg-----	90	High Texture/surface depth/rock fragments	1.00	Low	
98: Rutlege-----	75	Moderate Texture/rock fragments	0.50	High Wetness Droughty	1.00 0.50
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	High Texture/surface depth/rock fragments	1.00	High Wetness	1.00
Chipley-----	32	Moderate Texture/rock fragments	0.50	Low	
106: Pantego-----	55	Low Texture/rock fragments	0.10	High Wetness	1.00
Clara-----	30	High Texture/rock fragments	1.00	High Wetness	1.00
110: Arents-----	86	High Texture/rock fragments	1.00	Not Rated	
112: Pottsburg-----	72	High Texture/rock fragments	1.00	High Wetness	1.00
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Moderate Texture/rock fragments	0.50	Not Rated	
116: Blanton-----	50	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Lakeland-----	40	High Texture/rock fragments	1.00	Moderate Droughty	0.50

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Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Blanton-----	55	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Lakeland-----	38	High Texture/rock fragments	1.00	Moderate Droughty	0.50
119: Blanton-----	70	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
Lakeland-----	30	High Texture/rock fragments	1.00	Moderate Droughty	0.50
121: Goldsboro-----	80	Moderate Texture/rock fragments	0.50	Moderate Droughty	0.50
122: Goldsboro-----	78	Moderate Texture/rock fragments	0.50	Low	
123: Blanton-----	60	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
Lakeland-----	33	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50
127: Goldsboro-----	74	Moderate Texture/rock fragments	0.50	Low	
128: Blanton-----	70	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Bonneau-----	30	High Texture/rock fragments	1.00	Moderate Droughty	0.50

Soil Survey of Washington County, Florida

Table 8e.--Forestland Management (Part 5)--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality (FL)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
129: Blanton-----	75	High Texture/rock fragments	1.00	Moderate Droughty	0.50
Bonneau-----	25	High Texture/surface depth/rock fragments	1.00	Moderate Droughty	0.50

Soil Survey of Washington County, Florida

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	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.91	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.91 0.40	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.91
Pickney-----	25	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.92	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.92 0.40	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 0.92
Pamlico-----	19	Very limited Depth to saturated zone Flooding Ponding Organic matter content	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Organic matter content Flooding	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Organic matter content Flooding Ponding	1.00 1.00 1.00 1.00
4: Gritney-----	86	Somewhat limited Slow water movement Too sandy	0.96 0.38	Somewhat limited Slow water movement Too sandy	0.96 0.38	Somewhat limited Slow water movement Slope Too sandy	0.96 0.50 0.38
7: Bladen-----	60	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.96	Very limited Depth to saturated zone Slow water movement	1.00 0.96	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.96 0.60
Dunbar-----	25	Very limited Depth to saturated zone Flooding Too sandy Slow water movement	1.00 1.00 0.75 0.15	Very limited Depth to saturated zone Too sandy Slow water movement	1.00 0.75 0.15	Very limited Depth to saturated zone Too sandy Flooding Slow water movement	1.00 0.75 0.60 0.15
9: Albany-----	38	Somewhat limited Too sandy Depth to saturated zone	0.95 0.39	Somewhat limited Too sandy Depth to saturated zone	0.95 0.19	Somewhat limited Too sandy Depth to saturated zone Slope	0.95 0.39 0.12
Chipley-----	20	Very limited Too sandy Depth to saturated zone	1.00 0.39	Very limited Too sandy Depth to saturated zone	1.00 0.19	Very limited Too sandy Depth to saturated zone Slope	1.00 0.39 0.12

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Leon-----	16	Very limited Depth to saturated zone Too sandy	1.00  1.00	Very limited Too sandy Depth to saturated zone	1.00  0.99	Very limited Depth to saturated zone Too sandy Slope	1.00  1.00 0.12
11: Dothan-----	93	Somewhat limited Too sandy Slow water movement	0.45  0.26	Somewhat limited Too sandy Slow water movement	0.45  0.26	Somewhat limited Too sandy Slow water movement	0.45  0.26
12: Dothan-----	88	Somewhat limited Too sandy Slow water movement	0.38  0.26	Somewhat limited Too sandy Slow water movement	0.38  0.26	Somewhat limited Slope Too sandy Slow water movement	0.50  0.38 0.26
14: Dothan-----	87	Somewhat limited Too sandy Slow water movement	0.38  0.26	Somewhat limited Too sandy Slow water movement	0.38  0.26	Very limited Slope Too sandy Slow water movement	1.00  0.38 0.26
18: Fuquay-----	55	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
Dothan-----	25	Somewhat limited Too sandy Slow water movement	0.38  0.26	Somewhat limited Too sandy Slow water movement	0.38  0.26	Very limited Slope Too sandy Slow water movement	1.00  0.38 0.26
22: Nankin-----	52	Somewhat limited Slow water movement	0.26	Somewhat limited Slow water movement	0.26	Somewhat limited Slope Slow water movement	0.50 0.26
Cowarts-----	25	Somewhat limited Too sandy Slow water movement	0.81  0.44	Somewhat limited Too sandy Slow water movement	0.81  0.44	Somewhat limited Too sandy Slope Slow water movement	0.81  0.50 0.44
23: Nankin-----	57	Somewhat limited Slow water movement	0.26	Somewhat limited Slow water movement	0.26	Very limited Slope Slow water movement	1.00 0.26
Cowarts-----	21	Somewhat limited Too sandy Slow water movement	0.87  0.44	Somewhat limited Too sandy Slow water movement	0.87  0.44	Very limited Slope Too sandy Slow water movement	1.00  0.87 0.44

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29: Dunbar-----	72	Very limited Depth to saturated zone Flooding Too sandy Slow water movement	1.00  1.00 0.75 0.15	Very limited Depth to saturated zone Too sandy Slow water movement	1.00  0.75 0.15	Very limited Depth to saturated zone Too sandy Flooding Slow water movement	1.00  0.75 0.60 0.15
35: Lucy-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
Troup-----	42	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
36: Troup-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
Lucy-----	40	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
39: Bonifay-----	50	Somewhat limited Too sandy	0.99	Somewhat limited Too sandy	0.99	Somewhat limited Too sandy Slope	0.99 0.12
Fuquay-----	34	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Slope	0.98 0.12
40: Bonifay-----	80	Somewhat limited Too sandy	0.93	Somewhat limited Too sandy	0.93	Very limited Slope Too sandy	1.00 0.93
41: Lucy-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
52: Grady-----	85	Very limited Depth to saturated zone Ponding Slow water movement	1.00  1.00 0.96	Very limited Depth to saturated zone Ponding Slow water movement	1.00  1.00 0.96	Very limited Depth to saturated zone Ponding Slow water movement	1.00  1.00 0.96
54: Albany-----	63	Very limited Flooding Too sandy Depth to saturated zone	1.00 0.95 0.39	Somewhat limited Too sandy Depth to saturated zone	0.95 0.19	Somewhat limited Too sandy Flooding Depth to saturated zone Slope	0.95 0.60 0.39 0.12

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54: Ocilla-----	24	Very limited Flooding Too sandy Depth to saturated zone	1.00 1.00 0.81	Very limited Too sandy Depth to saturated zone	1.00 0.48	Very limited Too sandy Depth to saturated zone Flooding Slope	1.00 0.81 0.60 0.12
55: Chipley-----	55	Very limited Too sandy Depth to saturated zone	1.00 0.39	Very limited Too sandy Depth to saturated zone	1.00 0.19	Very limited Too sandy Depth to saturated zone Slope	1.00 0.39 0.12
Albany-----	27	Somewhat limited Too sandy Depth to saturated zone	0.95 0.39	Somewhat limited Too sandy Depth to saturated zone	0.95 0.19	Somewhat limited Too sandy Depth to saturated zone Slope	0.95 0.39 0.12
Hurricane-----	15	Very limited Too sandy Depth to saturated zone	1.00 0.39	Very limited Too sandy Depth to saturated zone	1.00 0.19	Very limited Too sandy Depth to saturated zone Slope	1.00 0.39 0.12
56: Albany-----	72	Somewhat limited Too sandy Depth to saturated zone	0.95 0.39	Somewhat limited Too sandy Depth to saturated zone	0.95 0.19	Very limited Slope Too sandy Depth to saturated zone	1.00 0.95 0.39
Ocilla-----	16	Very limited Too sandy Depth to saturated zone	1.00 0.81	Very limited Too sandy Depth to saturated zone	1.00 0.48	Very limited Too sandy Slope Depth to saturated zone	1.00 1.00 0.81
57: Ocilla-----	70	Very limited Too sandy Depth to saturated zone	1.00 0.81	Very limited Too sandy Depth to saturated zone	1.00 0.48	Very limited Too sandy Depth to saturated zone Slope	1.00 0.81 0.12
Leeffield-----	18	Somewhat limited Too sandy Depth to saturated zone Slow water movement	0.91 0.39 0.26	Somewhat limited Too sandy Slow water movement Depth to saturated zone	0.91 0.26 0.19	Somewhat limited Too sandy Depth to saturated zone Slow water movement Slope	0.91 0.39 0.26 0.12
61: Lakeland-----	74	Very limited Too sandy Slope	1.00 0.16	Very limited Too sandy Slope	1.00 0.16	Very limited Slope Too sandy	1.00 1.00

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62: Lakeland-----	77	Very limited Too sandy Too steep	1.00 1.00	Very limited Too sandy Too steep	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
63: Lakeland-----	76	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
64: Lakeland-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
67: Nankin-----	52	Somewhat limited Slow water movement Slope	0.26 0.04	Somewhat limited Slow water movement Slope	0.26 0.04	Very limited Slope Slow water movement	1.00 0.26
Cowarts-----	28	Somewhat limited Too sandy Slow water movement Slope	0.81 0.44 0.04	Somewhat limited Too sandy Slow water movement Slope	0.81 0.44 0.04	Very limited Slope Too sandy Slow water movement	1.00 0.81 0.44
Lakeland-----	17	Very limited Too sandy Slope	1.00 0.04	Very limited Too sandy Slope	1.00 0.04	Very limited Too sandy Slope	1.00 1.00
68: Nankin-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Cowarts-----	30	Very limited Too steep Too sandy Slow water movement	1.00 0.81 0.44	Very limited Too steep Too sandy Slow water movement	1.00 0.81 0.44	Very limited Slope Too sandy Slow water movement	1.00 0.81 0.44
Lakeland-----	16	Very limited Too sandy Too steep	1.00 1.00	Very limited Too sandy Too steep	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
71: Lynchburg-----	90	Very limited Depth to saturated zone Too sandy	1.00 0.82	Very limited Depth to saturated zone Too sandy	0.99 0.82	Very limited Depth to saturated zone Too sandy	1.00 0.82
72: Lynchburg-----	88	Very limited Depth to saturated zone Too sandy	1.00 0.82	Very limited Depth to saturated zone Too sandy	0.99 0.82	Very limited Depth to saturated zone Too sandy Slope	1.00 0.82 0.50

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85: Searcy-----	56	Somewhat limited Too sandy Slow water movement Depth to saturated zone	0.46 0.26 0.07	Somewhat limited Too sandy Slow water movement Depth to saturated zone	0.46 0.26 0.03	Somewhat limited Slope Too sandy Slow water movement Depth to saturated zone	0.50 0.46 0.26 0.07
Oktibbeha-----	31	Very limited Slow water movement Too clayey	1.00 1.00	Very limited Slow water movement Too clayey	1.00 1.00	Very limited Slow water movement Too clayey Slope	1.00 1.00 0.50
86: Hannon-----	60	Very limited Slow water movement	1.00	Very limited Slow water movement	1.00	Very limited Slow water movement Slope	1.00 1.00
Oktibbeha-----	40	Very limited Slow water movement Too clayey	1.00 1.00	Very limited Slow water movement Too clayey	1.00 1.00	Very limited Slow water movement Slope Too clayey	1.00 1.00 1.00
87: Clara-----	50	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00	Very limited Too sandy Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Ponding	1.00 1.00 1.00
Plummer-----	30	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.99	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.99	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.99
90: Rains-----	56	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.81	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.81	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.81
Bayboro-----	40	Very limited Depth to saturated zone Ponding Slow water movement	1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Slow water movement	1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Slow water movement	1.00 1.00 0.96
91: Orangeburg-----	87	Somewhat limited Too sandy	0.80	Somewhat limited Too sandy	0.80	Somewhat limited Too sandy Slope	0.80 0.50

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96: Orangeburg-----	90	Somewhat limited Too sandy	0.80	Somewhat limited Too sandy	0.80	Very limited Slope Too sandy	1.00 0.80
98: Rutlege-----	75	Very limited Depth to saturated zone Flooding Ponding Too sandy	1.00 1.00 1.00 0.90	Very limited Ponding Depth to saturated zone Too sandy Flooding	1.00 1.00 0.90 0.40	Very limited Depth to saturated zone Flooding Ponding Too sandy	1.00 1.00 1.00 0.90
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Too sandy Depth to saturated zone	1.00 0.99	Very limited Depth to saturated zone Too sandy	1.00 1.00
Chipley-----	32	Very limited Too sandy Depth to saturated zone	1.00 0.39	Very limited Too sandy Depth to saturated zone	1.00 0.19	Very limited Too sandy Depth to saturated zone	1.00 0.39
106: Pantego-----	55	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.01	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.01	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.01
Clara-----	30	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00	Very limited Too sandy Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Ponding	1.00 1.00 1.00
110: Arents-----	86	Very limited Too sandy Depth to saturated zone	1.00 0.07	Very limited Too sandy Depth to saturated zone	1.00 0.03	Very limited Too sandy Slope Depth to saturated zone	1.00 1.00 0.07
112: Pottsburg-----	72	Very limited Depth to saturated zone Flooding Too sandy	1.00 1.00 1.00	Very limited Too sandy Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too sandy Flooding	1.00 1.00 0.60
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Very limited Too steep Too sandy	1.00 0.52	Very limited Too steep Too sandy	1.00 0.52	Very limited Slope Too sandy	1.00 0.52

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Blanton-----	50	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
Lakeland-----	40	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
117: Blanton-----	55	Very limited Too sandy	0.99	Very limited Too sandy	0.99	Very limited Slope Too sandy	1.00 0.99
Lakeland-----	38	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
119: Blanton-----	70	Very limited Too sandy Slope	1.00 0.16	Very limited Too sandy Slope	1.00 0.16	Very limited Slope Too sandy	1.00 1.00
Lakeland-----	30	Very limited Too sandy Slope	1.00 0.16	Very limited Too sandy Slope	1.00 0.16	Very limited Slope Too sandy	1.00 1.00
121: Goldsboro-----	80	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94
122: Goldsboro-----	78	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy Slope	0.94 0.50
123: Blanton-----	60	Very limited Too sandy Too steep	1.00 1.00	Very limited Too sandy Too steep	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
Lakeland-----	33	Very limited Too sandy Too steep	1.00 1.00	Very limited Too sandy Too steep	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
127: Goldsboro-----	74	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Very limited Slope Too sandy	1.00 0.94
128: Blanton-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
Bonneau-----	30	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12

Soil Survey of Washington County, Florida

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
129: Blanton-----	75	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
Bonneau-----	25	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00

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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	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.91 0.40	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.91 0.40	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.88
Pickney-----	25	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.92 0.40	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.92 0.40	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.51
Pamlico-----	19	Very limited Depth to saturated zone Organic matter content Ponding Flooding	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Organic matter content Ponding Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Flooding Organic matter content Depth to saturated zone	1.00 1.00 1.00 1.00
4: Gritney-----	86	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Not limited	
7: Bladen-----	60	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Dunbar-----	25	Very limited Depth to saturated zone Too sandy	1.00 0.75	Very limited Depth to saturated zone Too sandy	1.00 0.75	Very limited Depth to saturated zone Flooding	1.00 0.60
9: Albany-----	38	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95	Very limited Droughty Depth to saturated zone	1.00 0.19
Chipley-----	20	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Depth to saturated zone	0.85 0.19
Leon-----	16	Very limited Too sandy Depth to saturated zone	1.00 0.99	Very limited Too sandy Depth to saturated zone	1.00 0.99	Somewhat limited Depth to saturated zone Too sandy	0.99 0.50
11: Dothan-----	93	Somewhat limited Too sandy	0.45	Somewhat limited Too sandy	0.45	Not limited	

Soil Survey of Washington County, Florida

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12: Dothan-----	88	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Somewhat limited Droughty	0.34
14: Dothan-----	87	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Somewhat limited Droughty	0.11
18: Fuquay-----	55	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy	0.50
Dothan-----	25	Somewhat limited Too sandy	0.38	Somewhat limited Too sandy	0.38	Somewhat limited Droughty	0.03
22: Nankin-----	52	Not limited		Not limited		Not limited	
Cowarts-----	25	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Not limited	
23: Nankin-----	57	Not limited		Not limited		Not limited	
Cowarts-----	21	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Not limited	
29: Dunbar-----	72	Very limited Depth to saturated zone Too sandy	1.00 0.75	Very limited Depth to saturated zone Too sandy	1.00 0.75	Very limited Depth to saturated zone Flooding	1.00 0.60
35: Lucy-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.08
Troup-----	42	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.34
36: Troup-----	45	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.34
Lucy-----	40	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.01
39: Bonifay-----	50	Somewhat limited Too sandy	0.99	Somewhat limited Too sandy	0.99	Somewhat limited Droughty Too sandy	0.92 0.50
Fuquay-----	34	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy	0.98	Somewhat limited Too sandy Droughty	0.50 0.47

Soil Survey of Washington County, Florida

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40: Bonifay-----	80	Somewhat limited Too sandy	0.93	Somewhat limited Too sandy	0.93	Somewhat limited Droughty	0.90
41: Lucy-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.12
52: Grady-----	85	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
54: Albany-----	63	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95	Very limited Droughty Flooding Depth to saturated zone	1.00 0.60 0.19
Ocilla-----	24	Very limited Too sandy Depth to saturated zone	1.00 0.11	Very limited Too sandy Depth to saturated zone	1.00 0.11	Somewhat limited Flooding Too sandy Depth to saturated zone Droughty	0.60 0.50 0.48 0.41
55: Chipley-----	55	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy Depth to saturated zone	0.83 0.50 0.19
Albany-----	27	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95	Very limited Droughty Depth to saturated zone	1.00 0.19
Hurricane-----	15	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy Depth to saturated zone	0.99 0.50 0.19
56: Albany-----	72	Somewhat limited Too sandy	0.95	Somewhat limited Too sandy	0.95	Very limited Droughty Depth to saturated zone	1.00 0.19
Ocilla-----	16	Very limited Too sandy Depth to saturated zone	1.00 0.11	Very limited Too sandy Depth to saturated zone	1.00 0.11	Somewhat limited Too sandy Depth to saturated zone Droughty	0.50 0.48 0.06

Soil Survey of Washington County, Florida

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57: Ocilla-----	70	Very limited Too sandy Depth to saturated zone	1.00 0.11	Very limited Too sandy Depth to saturated zone	1.00 0.11	Somewhat limited Droughty Too sandy Depth to saturated zone	0.91 0.50 0.48
Leefield-----	18	Somewhat limited Too sandy	0.91	Somewhat limited Too sandy	0.91	Somewhat limited Droughty Depth to saturated zone	0.65 0.19
61: Lakeland-----	74	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.16
62: Lakeland-----	77	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 0.08	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
63: Lakeland-----	76	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
64: Lakeland-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
67: Nankin-----	52	Not limited		Not limited		Somewhat limited Slope	0.04
Cowarts-----	28	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Slope	0.04
Lakeland-----	17	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.04
68: Nankin-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.08	Very limited Too steep	1.00
Cowarts-----	30	Very limited Slope Too sandy	1.00 0.81	Somewhat limited Too sandy Slope	0.81 0.08	Very limited Too steep	1.00
Lakeland-----	16	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 0.08	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50

Soil Survey of Washington County, Florida

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
71: Lynchburg-----	90	Somewhat limited Depth to saturated zone Too sandy	0.99  0.82	Somewhat limited Depth to saturated zone Too sandy	0.99  0.82	Somewhat limited Depth to saturated zone	0.99
72: Lynchburg-----	88	Somewhat limited Depth to saturated zone Too sandy	0.99  0.82	Somewhat limited Depth to saturated zone Too sandy	0.99  0.82	Somewhat limited Depth to saturated zone	0.99
85: Searcy-----	56	Somewhat limited Too sandy	0.46	Somewhat limited Too sandy	0.46	Somewhat limited Depth to saturated zone	0.03
Oktribbeha-----	31	Very limited Too clayey	1.00	Very limited Too clayey	1.00	Very limited Too clayey Droughty	1.00 0.01
86: Hannon-----	60	Not limited		Not limited		Somewhat limited Droughty	0.03
Oktribbeha-----	40	Very limited Too clayey	1.00	Very limited Too clayey	1.00	Very limited Too clayey	1.00
87: Clara-----	50	Very limited Depth to saturated zone Too sandy Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Too sandy Ponding	1.00  1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.50
Plummer-----	30	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.99	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.99	Very limited Ponding Depth to saturated zone Droughty Too sandy	1.00 1.00 0.92 0.50
90: Rains-----	56	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.81	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.81	Very limited Depth to saturated zone Ponding	1.00 1.00
Bayboro-----	40	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
91: Orangeburg-----	87	Somewhat limited Too sandy	0.80	Somewhat limited Too sandy	0.80	Not limited	
96: Orangeburg-----	90	Somewhat limited Too sandy	0.80	Somewhat limited Too sandy	0.80	Not limited	

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
98: Rutlege-----	75	Very limited Depth to saturated zone Ponding Too sandy Flooding	1.00  1.00 0.90 0.40	Very limited Depth to saturated zone Ponding Too sandy Flooding	1.00  1.00 0.90 0.40	Very limited Ponding Flooding Depth to saturated zone Droughty	1.00 1.00 1.00  0.76
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Very limited Too sandy Depth to saturated zone	1.00  0.99	Very limited Too sandy Depth to saturated zone	1.00  0.99	Somewhat limited Depth to saturated zone Too sandy	0.99  0.50
Chipley-----	32	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Depth to saturated zone	0.80 0.19
106: Pantego-----	55	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.01	Very limited Depth to saturated zone Ponding Too sandy	1.00  1.00 0.01	Very limited Ponding Depth to saturated zone	1.00 1.00
Clara-----	30	Very limited Depth to saturated zone Too sandy Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Too sandy Ponding	1.00  1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.50
110: Arents-----	86	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy Depth to saturated zone	1.00 0.50 0.03
112: Pottsburg-----	72	Very limited Depth to saturated zone Too sandy	1.00  1.00	Very limited Depth to saturated zone Too sandy	1.00  1.00	Very limited Depth to saturated zone Flooding Too sandy Droughty	1.00  0.60 0.50 0.37
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Somewhat limited Too sandy	0.52	Somewhat limited Too sandy	0.52	Very limited Too steep	1.00
116: Blanton-----	50	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy	0.99 0.50

Soil Survey of Washington County, Florida

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Lakeland-----	40	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
117: Blanton-----	55	Very limited Too sandy	0.99	Very limited Too sandy	0.99	Very limited Droughty Too sandy	0.99 0.50
Lakeland-----	38	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
119: Blanton-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Slope	0.99 0.16
Lakeland-----	30	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.16
121: Goldsboro-----	80	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Not limited	
122: Goldsboro-----	78	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Not limited	
123: Blanton-----	60	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 0.08	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
Lakeland-----	33	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 0.08	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
127: Goldsboro-----	74	Somewhat limited Too sandy	0.94	Somewhat limited Too sandy	0.94	Not limited	
128: Blanton-----	70	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty	0.99
Bonneau-----	30	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.19
129: Blanton-----	75	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty	0.99
Bonneau-----	25	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Too sandy	0.50

Soil Survey of Washington County, Florida

Table 10.--Wildlife Habitat

[See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Forest- land wildlife	Wetland wildlife
2: Rutlege-----	Very poor	Poor	Poor	Poor	Poor	Fair	Good	Poor	Poor	Fair
Pickney-----	Very poor	Poor	Fair	Poor	Poor	Good	Very poor	Poor	Poor	Good
Pamlico-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
4: Gritney-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
7: Bladen-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Dunbar-----	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Fair
9: Albany-----	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Poor
Chipley-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Leon-----	Poor	Fair	Good	Poor	Fair	Fair	Poor	Fair	Fair	Poor
11: Dothan-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
12: Dothan-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
14: Dothan-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
18: Fuquay-----	Fair	Fair	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
Dothan-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
22: Nankin-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cowarts-----	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
23: Nankin-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Soil Survey of Washington County, Florida

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Forest- land wildlife	Wetland wildlife
23: Cowarts-----	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
29: Dunbar-----	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Fair
35: Lucy-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Troup-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
36: Troup-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
Lucy-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
39: Bonifay-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
Fuquay-----	Fair	Fair	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
40: Bonifay-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
41: Lucy-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
52: Grady-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
54: Albany-----	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Poor
Ocilla-----	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Good	Fair
55: Chipley-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Albany-----	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Poor
Hurricane----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
56: Albany-----	Fair	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Poor
Ocilla-----	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Good	Fair

Soil Survey of Washington County, Florida

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Forest- land wildlife	Wetland wildlife
57: Ocilla-----	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Good	Fair
Leefield-----	Fair	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Very poor
61: Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
62: Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
63: Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
64: Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
67: Nankin-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cowarts-----	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
68: Nankin-----	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cowarts-----	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
71: Lynchburg----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
72: Lynchburg----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
85: Searcy-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Oktibbeha----	Fair	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Poor
86: Hannon-----	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Good	Poor
Oktibbeha----	Fair	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Poor

Soil Survey of Washington County, Florida

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Forest- land wildlife	Wetland wildlife
87: Clara-----	Very poor	Very poor	Poor	Fair	Poor	Fair	Fair	Very poor	Poor	Fair
Plummer-----	Poor	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor
90: Rains-----	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Good	Good
Bayboro-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
91: Orangeburg---	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
96: Orangeburg---	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
98: Rutlege-----	Very poor	Poor	Poor	Poor	Poor	Fair	Good	Poor	Poor	Fair
99: Water.										
100: Leon-----	Poor	Fair	Good	Poor	Fair	Fair	Poor	Fair	Fair	Poor
Chipley-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
106: Pantego-----	Very poor	Very poor	Very poor	Fair	Poor	Good	Good	Very poor	Poor	Good
Clara-----	Very poor	Very poor	Poor	Fair	Poor	Fair	Fair	Very poor	Poor	Fair
110: Arents.										
112: Pottsburg----	Poor	Poor	Fair	Poor	Poor	Poor	Poor	Poor	Poor	Poor
113: Pits-----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
Udorthents---	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
116: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Soil Survey of Washington County, Florida

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Forest- land wildlife	Wetland wildlife
117: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
119: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
121: Goldsboro-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
122: Goldsboro-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
123: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lakeland-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
127: Goldsboro-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
128: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Bonneau-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
129: Blanton-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Bonneau-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor

Soil Survey of Washington County, Florida

Table 11a.--Building Site Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Pickney-----	25	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Pamlico-----	19	Very limited Ponding Flooding Depth to saturated zone Organic matter content Subsidence	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Subsidence	1.00 1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone Organic matter content Subsidence	1.00 1.00 1.00 1.00
4: Gritney-----	86	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
7: Bladen-----	60	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Dunbar-----	25	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
9: Albany-----	38	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Chipley-----	20	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Leon-----	16	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
11: Dothan-----	93	Not limited		Somewhat limited Depth to saturated zone	0.73	Not limited	

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Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12: Dothan-----	88	Not limited		Somewhat limited Depth to saturated zone	0.73	Not limited	
14: Dothan-----	87	Not limited		Somewhat limited Depth to saturated zone	0.73	Somewhat limited Slope	0.88
18: Fuquay-----	55	Not limited		Somewhat limited Depth to saturated zone	0.61	Somewhat limited Slope	0.88
Dothan-----	25	Not limited		Somewhat limited Depth to saturated zone	0.73	Somewhat limited Slope	0.88
22: Nankin-----	52	Not limited		Not limited		Not limited	
Cowarts-----	25	Not limited		Somewhat limited Depth to saturated zone	0.73	Not limited	
23: Nankin-----	57	Not limited		Not limited		Somewhat limited Slope	0.88
Cowarts-----	21	Not limited		Somewhat limited Depth to saturated zone	0.73	Somewhat limited Slope	0.88
29: Dunbar-----	72	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
35: Lucy-----	45	Not limited		Not limited		Not limited	
Troup-----	42	Not limited		Not limited		Not limited	
36: Troup-----	45	Not limited		Not limited		Somewhat limited Slope	0.88
Lucy-----	40	Not limited		Not limited		Somewhat limited Slope	0.88
39: Bonifay-----	50	Not limited		Somewhat limited Depth to saturated zone	0.15	Not limited	
Fuquay-----	34	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	

Soil Survey of Washington County, Florida

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40: Bonifay-----	80	Not limited		Somewhat limited Depth to saturated zone	0.15	Somewhat limited Slope	0.88
41: Lucy-----	70	Not limited		Not limited		Not limited	
52: Grady-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
54: Albany-----	63	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Ocilla-----	24	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
55: Chipley-----	55	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Albany-----	27	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Hurricane-----	15	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
56: Albany-----	72	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.88 0.39
Ocilla-----	16	Somewhat limited Depth to saturated zone	0.81	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.88 0.81
57: Ocilla-----	70	Somewhat limited Depth to saturated zone	0.81	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.81
Leefield-----	18	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39

Soil Survey of Washington County, Florida

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61: Lakeland-----	74	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
62: Lakeland-----	77	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
63: Lakeland-----	76	Not limited		Not limited		Not limited	
64: Lakeland-----	70	Not limited		Not limited		Somewhat limited Slope	0.88
67: Nankin-----	52	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Cowarts-----	28	Somewhat limited Slope	0.04	Somewhat limited Depth to saturated zone Slope	0.73 0.04	Very limited Slope	1.00
Lakeland-----	17	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
68: Nankin-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Cowarts-----	30	Very limited Too steep	1.00	Very limited Too steep Depth to saturated zone	1.00 0.73	Very limited Slope	1.00
Lakeland-----	16	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
71: Lynchburg-----	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
72: Lynchburg-----	88	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
85: Searcy-----	56	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.07	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.07
Oktibbeha-----	31	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00

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Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86: Hannon-----	60	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell Slope	1.00 0.88
Oktribbeha-----	40	Very limited Shrink-swell	1.00	Very limited Shrink-swell	1.00	Very limited Shrink-swell Slope	1.00 0.88
87: Clara-----	50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Plummer-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
90: Rains-----	56	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Bayboro-----	40	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 0.50
91: Orangeburg-----	87	Not limited		Not limited		Not limited	
96: Orangeburg-----	90	Not limited		Not limited		Somewhat limited Slope	0.88
98: Rutlege-----	75	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Chipley-----	32	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39

Soil Survey of Washington County, Florida

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106: Pantego-----	55	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Clara-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
110: Arents-----	86	Somewhat limited Depth to saturated zone	0.07	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.88 0.07
112: Pottsburg-----	72	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
116: Blanton-----	50	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
Lakeland-----	40	Not limited		Not limited		Not limited	
117: Blanton-----	55	Not limited		Somewhat limited Depth to saturated zone	0.61	Somewhat limited Slope	0.88
Lakeland-----	38	Not limited		Not limited		Somewhat limited Slope	0.88
119: Blanton-----	70	Somewhat limited Slope	0.16	Somewhat limited Depth to saturated zone slope	0.61 0.16	Very limited Slope	1.00
Lakeland-----	30	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
121: Goldsboro-----	80	Not limited		Somewhat limited Depth to saturated zone	0.99	Not limited	

Soil Survey of Washington County, Florida

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
122: Goldsboro-----	78	Not limited		Somewhat limited Depth to saturated zone	0.99	Not limited	
123: Blanton-----	60	Very limited Too steep	1.00	Very limited Too steep Depth to saturated zone	1.00 0.61	Very limited Slope	1.00
Lakeland-----	33	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
127: Goldsboro-----	74	Not limited		Somewhat limited Depth to saturated zone	0.99	Somewhat limited Slope	0.88
128: Blanton-----	70	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
Bonneau-----	30	Not limited		Somewhat limited Depth to saturated zone	0.47	Not limited	
129: Blanton-----	75	Not limited		Somewhat limited Depth to saturated zone	0.61	Somewhat limited Slope	0.88
Bonneau-----	25	Not limited		Somewhat limited Depth to saturated zone	0.47	Somewhat limited Slope	0.88

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.88
Pickney-----	25	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.51
Pamlico-----	19	Very limited Ponding Depth to saturated zone Flooding Subsidence	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls Organic matter content Flooding	1.00 1.00 1.00 1.00 0.80	Very limited Ponding Flooding Organic matter content Depth to saturated zone	1.00 1.00 1.00 1.00
4: Gritney-----	86	Very limited Low strength Shrink-swell	1.00 0.50	Somewhat limited Too clayey Unstable excavation walls	0.28 0.10	Not limited	
7: Bladen-----	60	Very limited Depth to saturated zone Flooding Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Too clayey Unstable excavation walls	1.00 0.60 0.41 0.10	Very limited Depth to saturated zone Flooding	1.00 0.60
Dunbar-----	25	Very limited Depth to saturated zone Flooding Shrink-swell Low strength	1.00 1.00 0.50 0.50	Very limited Depth to saturated zone Flooding Too clayey Unstable excavation walls	1.00 0.60 0.12 0.10	Very limited Depth to saturated zone Flooding	1.00 0.60
9: Albany-----	38	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Very limited Droughty Depth to saturated zone	1.00 0.19

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Chipley-----	20	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.85 0.19
Leon-----	16	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Depth to saturated zone Too sandy	0.99 0.50
11: Dothan-----	93	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Not limited	
12: Dothan-----	88	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Somewhat limited Droughty	0.34
14: Dothan-----	87	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Somewhat limited Droughty	0.11
18: Fuquay-----	55	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.61	Somewhat limited Too sandy	0.50
Dothan-----	25	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Somewhat limited Droughty	0.03
22: Nankin-----	52	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls Too clayey	0.10 0.03	Not limited	
Cowarts-----	25	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Not limited	

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23: Nankin-----	57	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10	Not limited	
Cowarts-----	21	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.73 0.10	Not limited	
29: Dunbar-----	72	Very limited Depth to saturated zone Flooding Shrink-swell Low strength	1.00 1.00 0.50 0.50	Very limited Depth to saturated zone Flooding Too clayey Unstable excavation walls	1.00 0.60 0.12 0.10	Very limited Depth to saturated zone Flooding	1.00 0.60
35: Lucy-----	45	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Too sandy Droughty	0.50 0.08
Troup-----	42	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Too sandy Droughty	0.50 0.34
36: Troup-----	45	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Too sandy Droughty	0.50 0.34
Lucy-----	40	Not limited		Somewhat limited Unstable excavation walls	0.10	Somewhat limited Too sandy Droughty	0.50 0.01
39: Bonifay-----	50	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.15	Somewhat limited Droughty Too sandy	0.92 0.50
Fuquay-----	34	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.61	Somewhat limited Too sandy Droughty	0.50 0.47
40: Bonifay-----	80	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.15	Somewhat limited Droughty	0.90
41: Lucy-----	70	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Too sandy Droughty	0.50 0.12

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52: Grady-----	85	Very limited Depth to saturated zone Ponding Shrink-swell Low strength	1.00 1.00 0.50 0.50	Very limited Depth to saturated zone Ponding Too clayey Unstable excavation walls	1.00 1.00 0.88 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
54: Albany-----	63	Very limited Flooding  Depth to saturated zone	1.00  0.19	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.60	Very limited Droughty Flooding Depth to saturated zone	1.00 0.60 0.19
Ocilla-----	24	Very limited Flooding Depth to saturated zone	1.00 0.48	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.60	Somewhat limited Flooding Too sandy Depth to saturated zone Droughty	0.60 0.50 0.48 0.41
55: Chipley-----	55	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Droughty Too sandy Depth to saturated zone	0.83 0.50 0.19
Albany-----	27	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Very limited Droughty Depth to saturated zone	1.00 0.19
Hurricane-----	15	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Very limited Droughty Too sandy Depth to saturated zone	0.99 0.50 0.19
56: Albany-----	72	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Very limited Droughty Depth to saturated zone	1.00 0.19
Ocilla-----	16	Somewhat limited Depth to saturated zone	0.48	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Somewhat limited Too sandy Depth to saturated zone Droughty	0.50 0.48 0.06
57: Ocilla-----	70	Somewhat limited Depth to saturated zone	0.48	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Droughty Too sandy Depth to saturated zone	0.91 0.50 0.48

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57: Leefield-----	18	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.65 0.19
61: Lakeland-----	74	Somewhat limited Slope	0.16	Very limited Unstable excavation walls Slope	1.00 0.16	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.16
62: Lakeland-----	77	Very limited Too steep	1.00	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
63: Lakeland-----	76	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
64: Lakeland-----	70	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
67: Nankin-----	52	Somewhat limited Low strength Slope	0.50 0.04	Somewhat limited Unstable excavation walls Slope	0.10 0.04	Somewhat limited Slope	0.04
Cowarts-----	28	Somewhat limited Slope	0.04	Somewhat limited Depth to saturated zone Unstable excavation walls Slope	0.73 0.10 0.04	Somewhat limited Slope	0.04
Lakeland-----	17	Somewhat limited Slope	0.04	Very limited Unstable excavation walls Slope	1.00 0.04	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.04
68: Nankin-----	50	Very limited Too steep Low strength	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Cowarts-----	30	Very limited Too steep	1.00	Very limited Too steep Depth to saturated zone Unstable excavation walls	1.00 0.73 0.10	Very limited Too steep	1.00

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lakeland-----	16	Very limited Too steep	1.00	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
71: Lynchburg-----	90	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Somewhat limited Depth to saturated zone	0.99
72: Lynchburg-----	88	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone Unstable excavation walls Too clayey	1.00 0.10 0.05	Somewhat limited Depth to saturated zone	0.99
85: Searcy-----	56	Very limited Low strength Shrink-swell Depth to saturated zone	1.00 0.50 0.03	Very limited Depth to saturated zone Too clayey Unstable excavation walls	1.00 0.72 0.10	Somewhat limited Depth to saturated zone	0.03
Oktibbeha-----	31	Very limited Low strength Shrink-swell	1.00 1.00	Very limited Unstable excavation walls Too clayey	1.00 1.00	Very limited Too clayey Droughty	1.00 0.01
86: Hannon-----	60	Very limited Shrink-swell Low strength	1.00 1.00	Very limited Unstable excavation walls Too clayey	1.00 1.00	Somewhat limited Droughty	0.03
Oktibbeha-----	40	Very limited Low strength Shrink-swell	1.00 1.00	Very limited Unstable excavation walls Too clayey	1.00 1.00	Very limited Too clayey	1.00
87: Clara-----	50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.50
Plummer-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty Too sandy	1.00 1.00 0.92 0.50

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90: Rains-----	56	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding Unstable excavation walls	1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
Bayboro-----	40	Very limited Depth to saturated zone Low strength Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Unstable excavation walls Too clayey	1.00 1.00 0.10 0.03	Very limited Depth to saturated zone Ponding	1.00 1.00
91: Orangeburg-----	87	Not limited		Somewhat limited Unstable excavation walls	0.10	Not limited	
96: Orangeburg-----	90	Not limited		Somewhat limited Unstable excavation walls	0.10	Not limited	
98: Rutlege-----	75	Very limited Ponding Depth to saturated zone Flooding	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 1.00 0.80	Very limited Ponding Flooding Depth to saturated zone Droughty	1.00 1.00 1.00 0.76
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Depth to saturated zone Too sandy	0.99 0.50
Chipley-----	32	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.80 0.19
106: Pantego-----	55	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106: Clara-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.50
110: Arents-----	86	Somewhat limited Depth to saturated zone	0.03	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Very limited Droughty Too sandy Depth to saturated zone	1.00 0.50 0.03
112: Pottsburg-----	72	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Too sandy Droughty	1.00 0.60 0.50 0.37
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
116: Blanton-----	50	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.61	Very limited Droughty Too sandy	0.99 0.50
Lakeland-----	40	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
117: Blanton-----	55	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.61	Very limited Droughty Too sandy	0.99 0.50
Lakeland-----	38	Not limited		Very limited Unstable excavation walls	1.00	Somewhat limited Droughty Too sandy	0.99 0.50
119: Blanton-----	70	Somewhat limited Slope	0.16	Very limited Unstable excavation walls Depth to saturated zone Slope	1.00 0.61 0.16	Very limited Droughty Slope	0.99 0.16

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
119: Lakeland-----	30	Somewhat limited Slope	0.16	Very limited Unstable excavation walls Slope	1.00  0.16	Somewhat limited Droughty Too sandy Slope	0.99 0.50 0.16
121: Goldsboro-----	80	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.99  0.10	Not limited	
122: Goldsboro-----	78	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.99  0.10	Not limited	
123: Blanton-----	60	Very limited Too steep	1.00	Very limited Unstable excavation walls Too steep Depth to saturated zone	1.00  1.00 0.61	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
Lakeland-----	33	Very limited Too steep	1.00	Very limited Unstable excavation walls Too steep	1.00  1.00	Very limited Too steep Droughty Too sandy	1.00 0.99 0.50
127: Goldsboro-----	74	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.99  0.10	Not limited	
128: Blanton-----	70	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00  0.61	Very limited Droughty	0.99
Bonneau-----	30	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00  0.47	Somewhat limited Too sandy Droughty	0.50 0.19

Soil Survey of Washington County, Florida

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
129: Blanton-----	75	Not limited		Very limited Unstable excavation walls Depth to saturated zone	1.00 0.61	Very limited Droughty	0.99
Bonneau-----	25	Not limited		Somewhat limited Depth to saturated zone Unstable excavation walls	0.47 0.10	Somewhat limited Too sandy	0.50

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The rating classes and limiting features for septic tank absorption fields agree with criteria as set forth in chapter 64E-6 of the Florida Administrative Code, standards for onsite sewage treatment and disposal, effective May 24, 2004. The limiting feature criteria agrees with the standard subsurface drainfield system in chapter 64E-6, FAC. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Severely limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Pickney-----	25	Severely limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Pamlico-----	19	Severely limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Seepage	1.00 1.00 1.00
4: Gritney-----	86	Severely limited Restricted permeability	1.00	Somewhat limited Slope	0.32
7: Bladen-----	60	Severely limited Restricted permeability Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Dunbar-----	25	Severely limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00
9: Albany-----	38	Severely limited Depth to saturated zone	1.00	Very limited Seepage Depth to saturated zone Slope	1.00 1.00 0.08
Chipley-----	20	Severely limited Depth to saturated zone	1.00	Very limited Seepage Depth to saturated zone Slope	1.00 1.00 0.08
Leon-----	16	Severely limited Depth to saturated zone Presence of spodic material	1.00 0.50	Very limited Depth to saturated zone Seepage Slope	1.00 1.00 0.08
11: Dothan-----	93	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Somewhat limited Seepage	0.50

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12: Dothan-----	88	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Somewhat limited Seepage Slope	0.50 0.32
14: Dothan-----	87	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Very limited Slope Seepage	1.00 0.50
18: Fuquay-----	55	Moderately limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 1.00
Dothan-----	25	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Very limited Slope Seepage	1.00 0.50
22: Nankin-----	52	Moderately limited Restricted permeability	0.50	Somewhat limited Slope	0.32
Cowarts-----	25	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Somewhat limited Seepage Slope	0.53 0.32
23: Nankin-----	57	Moderately limited Restricted permeability	0.50	Very limited Slope	1.00
Cowarts-----	21	Moderately limited Depth to saturated zone Restricted permeability	0.99 0.50	Very limited Slope Seepage	1.00 0.28
29: Dunbar-----	72	Severely limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00
35: Lucy-----	45	Moderately limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 0.08
Troup-----	42	Slightly limited		Very limited Seepage Slope	1.00 0.08
36: Troup-----	45	Slightly limited		Very limited Seepage Slope	1.00 1.00
Lucy-----	40	Moderately limited Restricted permeability	0.50	Very limited Seepage Slope	1.00 1.00

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39: Bonifay-----	50	Slightly limited		Very limited Seepage	1.00
				Slope	0.08
Fuquay-----	34	Slightly limited		Very limited Seepage	1.00
				Depth to saturated zone	0.71
				Slope	0.08
40: Bonifay-----	80	Slightly limited		Very limited Seepage	1.00
				Slope	1.00
41: Lucy-----	70	Moderately limited Restricted permeability	0.50	Very limited Seepage	1.00
				Slope	0.08
52: Grady-----	85	Severely limited Restricted permeability	1.00	Very limited Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00		
54: Albany-----	63	Severely limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
Ocilla-----	24	Severely limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
55: Chipley-----	55	Severely limited Depth to saturated zone	1.00	Very limited Seepage	1.00
				Depth to saturated zone	1.00
				Slope	0.08
Albany-----	27	Severely limited Depth to saturated zone	1.00	Very limited Seepage	1.00
				Depth to saturated zone	1.00
				Slope	0.08
Hurricane-----	15	Severely limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Presence of spodic material	0.50	Depth to saturated zone	1.00
				Slope	0.08
56: Albany-----	72	Severely limited Depth to saturated zone	1.00	Very limited Seepage	1.00
				Depth to saturated zone	1.00
				Slope	1.00

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
56: Ocilla-----	16	Severely limited Depth to saturated zone Restricted permeability	1.00 0.50	Very limited Depth to saturated zone Seepage Slope	1.00 1.00 1.00
57: Ocilla-----	70	Severely limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Seepage Slope	1.00 1.00 0.08
Leefield-----	18	Severely limited Depth to saturated zone Restricted permeability	1.00 0.50	Very limited Seepage Depth to saturated zone Slope	1.00 1.00 0.08
61: Lakeland-----	74	Moderately limited Slope	0.16	Very limited Slope Seepage	1.00 1.00
62: Lakeland-----	77	Severely limited Slope	1.00	Very limited Slope Seepage	1.00 1.00
63: Lakeland-----	76	Slightly limited		Very limited Seepage Slope	1.00 0.08
64: Lakeland-----	70	Slightly limited		Very limited Seepage Slope	1.00 1.00
67: Nankin-----	52	Moderately limited Restricted permeability Slope	0.50 0.04	Very limited Slope	1.00
Cowarts-----	28	Moderately limited Depth to saturated zone Restricted permeability Slope	0.99 0.50 0.04	Very limited Slope Seepage	1.00 0.28
Lakeland-----	17	Slightly limited Slope	0.04	Very limited Seepage Slope	1.00 1.00
68: Nankin-----	50	Severely limited Slope Restricted permeability	1.00 0.50	Very limited Slope	1.00
Cowarts-----	30	Severely limited Slope Depth to saturated zone Restricted permeability	1.00 0.99 0.50	Very limited Slope Seepage	1.00 0.28

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lakeland-----	16	Severely limited Slope	1.00	Very limited Slope Seepage	1.00 1.00
71: Lynchburg-----	90	Severely limited Depth to saturated zone Restricted permeability	1.00 0.50	Very limited Depth to saturated zone Seepage	1.00 1.00
72: Lynchburg-----	88	Severely limited Depth to saturated zone Restricted permeability	1.00 0.50	Very limited Depth to saturated zone Seepage Slope	1.00 0.50 0.32
85: Searcy-----	56	Severely limited Restricted permeability Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Slope	0.44 0.32
Oktribeha-----	31	Severely limited Restricted permeability	1.00	Somewhat limited Slope	0.32
86: Hannon-----	60	Moderately limited Restricted permeability	0.50	Very limited Slope	1.00
Oktribeha-----	40	Severely limited Restricted permeability	1.00	Very limited Slope	1.00
87: Clara-----	50	Severely limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Seepage Depth to saturated zone	1.00 1.00 1.00
Plummer-----	30	Severely limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00
90: Rains-----	56	Severely limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.50	Very limited Depth to saturated zone Seepage Ponding	1.00 1.00 1.00
Bayboro-----	40	Severely limited Restricted permeability Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.50
91: Orangeburg-----	87	Moderately limited Restricted permeability	0.50	Somewhat limited Seepage Slope	0.50 0.32
96: Orangeburg-----	90	Moderately limited Restricted permeability	0.50	Very limited Slope Seepage	1.00 0.50

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
98: Rutlege-----	75	Severely limited Ponding Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Flooding Seepage	1.00 1.00 1.00
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Severely limited Depth to saturated zone Presence of spodic material	1.00 0.50	Very limited Depth to saturated zone Seepage	1.00 1.00
Chipley-----	32	Severely limited Depth to saturated zone	1.00	Very limited Seepage Depth to saturated zone	1.00 1.00
106: Pantego-----	55	Severely limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00
Clara-----	30	Severely limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Seepage Depth to saturated zone	1.00 1.00 1.00
110: Arents-----	86	Not rated		Very limited Seepage Depth to saturated zone Slope	1.00 1.00 1.00
112: Pottsburg-----	72	Severely limited Flooding Depth to saturated zone Presence of spodic material	1.00 1.00 0.50	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Not rated		Very limited Slope Seepage	1.00 0.18
116: Blanton-----	50	Slightly limited		Very limited Seepage Depth to saturated zone Slope	1.00 0.71 0.08
Lakeland-----	40	Slightly limited		Very limited Seepage Slope	1.00 0.08

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Blanton-----	55	Slightly limited		Very limited Seepage	1.00
				Slope	1.00
				Depth to saturated zone	0.71
Lakeland-----	38	Slightly limited		Very limited Seepage	1.00
				Slope	1.00
119: Blanton-----	70	Moderately limited Slope	0.16	Very limited Slope	1.00
				Seepage	1.00
				Depth to saturated zone	0.71
Lakeland-----	30	Moderately limited Slope	0.16	Very limited Slope	1.00
				Seepage	1.00
121: Goldsboro-----	80	Severely limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
122: Goldsboro-----	78	Severely limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	1.00
				Slope	0.32
123: Blanton-----	60	Severely limited Slope	1.00	Very limited Slope	1.00
				Seepage	1.00
				Depth to saturated zone	0.71
Lakeland-----	33	Severely limited Slope	1.00	Very limited Slope	1.00
				Seepage	1.00
127: Goldsboro-----	74	Severely limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.50	Slope	1.00
				Seepage	0.50
128: Blanton-----	70	Slightly limited		Very limited Seepage	1.00
				Depth to saturated zone	0.71
				Slope	0.08
Bonneau-----	30	Slightly limited		Very limited Seepage	1.00
				Depth to saturated zone	0.40
				Slope	0.08

Soil Survey of Washington County, Florida

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
129: Blanton-----	75	Slightly limited		Very limited Seepage Slope Depth to saturated zone	1.00 1.00 0.71
Bonneau-----	25	Slightly limited		Very limited Seepage Slope Depth to saturated zone	1.00 1.00 0.40

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Flooding Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
Pickney-----	25	Very limited Flooding Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
Pamlico-----	19	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 1.00
4: Gritney-----	86	Not limited		Not limited		Very limited Too clayey	1.00
7: Bladen-----	60	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too clayey	1.00 1.00
Dunbar-----	25	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
9: Albany-----	38	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86
Chipley-----	20	Very limited Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Leon-----	16	Very limited Depth to saturated zone Too sandy Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00
11: Dothan-----	93	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
12: Dothan-----	88	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
14: Dothan-----	87	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
18: Fuquay-----	55	Not limited		Very limited Seepage	1.00	Not limited	
Dothan-----	25	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
22: Nankin-----	52	Not limited		Not limited		Not limited	
Cowarts-----	25	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
23: Nankin-----	57	Not limited		Not limited		Not limited	
Cowarts-----	21	Somewhat limited Depth to saturated zone	0.02	Not limited		Not limited	
29: Dunbar-----	72	Very limited Flooding Depth to saturated zone Too clayey	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
35: Lucy-----	45	Not limited		Very limited Seepage	1.00	Not limited	
Troup-----	42	Very limited Too sandy	1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
36: Troup-----	45	Very limited Too sandy	1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
Lucy-----	40	Not limited		Very limited Seepage	1.00	Not limited	
39: Bonifay-----	50	Very limited Too sandy	1.00	Very limited Seepage	1.00	Very limited Too sandy	1.00
Fuquay-----	34	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy	1.00
40: Bonifay-----	80	Not limited		Very limited Seepage	1.00	Not limited	
41: Lucy-----	70	Not limited		Very limited Seepage	1.00	Not limited	
52: Grady-----	85	Very limited Depth to saturated zone Ponding Too clayey	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding Too clayey Hard to compact	1.00 1.00 0.50 0.50
54: Albany-----	63	Very limited Flooding Depth to saturated zone Too sandy	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86
Ocilla-----	24	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Somewhat limited Depth to saturated zone	0.96
55: Chipley-----	55	Very limited Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86
Albany-----	27	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Hurricane-----	15	Very limited Depth to saturated zone Too sandy Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86
56: Albany-----	72	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86
Ocilla-----	16	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.96
57: Ocilla-----	70	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.96
Leefield-----	18	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Somewhat limited Depth to saturated zone	0.86
61: Lakeland-----	74	Very limited Seepage, bottom layer Too sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Too sandy Seepage Slope	1.00 1.00 0.16
62: Lakeland-----	77	Very limited Seepage, bottom layer Too sandy Too steep	1.00 1.00 1.00	Very limited Seepage Too steep	1.00 1.00	Very limited Too sandy Seepage Too steep	1.00 1.00 1.00
63: Lakeland-----	76	Very limited Seepage, bottom layer Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
64: Lakeland-----	70	Very limited Seepage, bottom layer Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
67: Nankin-----	52	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67:							
Cowarts-----	28	Somewhat limited Slope Depth to saturated zone	0.04 0.02	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04
Lakeland-----	17	Very limited Seepage, bottom layer Too sandy Slope	1.00 1.00 0.04	Very limited Seepage Slope	1.00 0.04	Very limited Too sandy Seepage Slope	1.00 1.00 0.04
68:							
Nankin-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
Cowarts-----	30	Very limited Too steep Depth to saturated zone	1.00 0.02	Very limited Too steep	1.00	Very limited Too steep	1.00
Lakeland-----	16	Very limited Seepage, bottom layer Too sandy Too steep	1.00 1.00 1.00	Very limited Seepage Too steep	1.00 1.00	Very limited Too sandy Seepage Too steep	1.00 1.00 1.00
71:							
Lynchburg-----	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
72:							
Lynchburg-----	88	Very limited Depth to saturated zone Too clayey	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
85:							
Searcy-----	56	Very limited Too clayey Depth to saturated zone	1.00 0.95	Somewhat limited Depth to saturated zone	0.44	Very limited Too clayey Hard to compact Depth to saturated zone	1.00 1.00 0.68
Oktibbeha-----	31	Very limited Too clayey	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00
86:							
Hannon-----	60	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
Oktibbeha-----	40	Very limited Too clayey	1.00	Not limited		Very limited Too clayey Hard to compact	1.00 1.00

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Clara-----	50	Very limited Depth to saturated zone Ponding Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 1.00
Plummer-----	30	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 1.00
90: Rains-----	56	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Bayboro-----	40	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00
91: Orangeburg-----	87	Not limited		Not limited		Not limited	
96: Orangeburg-----	90	Not limited		Not limited		Not limited	
98: Rutlege-----	75	Very limited Flooding Depth to saturated zone Ponding Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Ponding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 1.00
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Very limited Depth to saturated zone Too sandy Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
Chipley-----	32	Very limited Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.86

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106: Pantego-----	55	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Clara-----	30	Very limited Depth to saturated zone Ponding Seepage, bottom layer Too sandy	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00 1.00
110: Arents-----	86	Very limited Depth to saturated zone Seepage, bottom layer Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone	1.00 1.00 0.68
112: Pottsburg-----	72	Very limited Flooding Depth to saturated zone Too sandy	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
116: Blanton-----	50	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
Lakeland-----	40	Very limited Seepage, bottom layer Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
117: Blanton-----	55	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
Lakeland-----	38	Very limited Seepage, bottom layer Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00

Soil Survey of Washington County, Florida

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
119: Blanton-----	70	Very limited Depth to saturated zone Too sandy Slope	1.00 1.00 0.16	Very limited Depth to saturated zone Seepage Slope	1.00 1.00 0.16	Very limited Too sandy Seepage Slope	1.00 1.00 0.16
Lakeland-----	30	Very limited Seepage, bottom layer Too sandy Slope	1.00 1.00 0.16	Very limited Seepage Slope	1.00 0.16	Very limited Too sandy Seepage Slope	1.00 1.00 0.16
121: Goldsboro-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.47
122: Goldsboro-----	78	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.47
123: Blanton-----	60	Very limited Depth to saturated zone Too sandy Too steep	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Too steep	1.00 1.00 1.00	Very limited Too sandy Seepage Too steep	1.00 1.00 1.00
Lakeland-----	33	Very limited Seepage, bottom layer Too sandy Too steep	1.00 1.00 1.00	Very limited Seepage Too steep	1.00 1.00	Very limited Too sandy Seepage Too steep	1.00 1.00 1.00
127: Goldsboro-----	74	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.47
128: Blanton-----	70	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
Bonneau-----	30	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Not limited	
129: Blanton-----	75	Very limited Depth to saturated zone Too sandy	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage	1.00 1.00
Bonneau-----	25	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Not limited	

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of gravel or sand. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
2: Rutlege-----	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.46
		Thickest layer	0.00	Bottom layer	0.83
Pickney-----	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.05
		Thickest layer	0.00	Bottom layer	0.45
Pamlico-----	19	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
4: Gritney-----	86	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.01
7: Bladen-----	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dunbar-----	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
9: Albany-----	38	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.12
Chipley-----	20	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.68
		Thickest layer	0.00		
Leon-----	16	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.40
		Thickest layer	0.00	Bottom layer	0.79
11: Dothan-----	93	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.01
12: Dothan-----	88	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.05
		Thickest layer	0.00	Bottom layer	0.08

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
14: Dothan-----	87	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.05
		Thickest layer	0.00	Bottom layer	0.08
18: Fuquay-----	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.12
Dothan-----	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.05
		Thickest layer	0.00	Bottom layer	0.08
22: Nankin-----	52	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.01
Cowarts-----	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.09
23: Nankin-----	57	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.01
Cowarts-----	21	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.09
29: Dunbar-----	72	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
35: Lucy-----	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.11
Troup-----	42	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.25
36: Troup-----	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.25
Lucy-----	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.11
39: Bonifay-----	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.66

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
39: Fuquay-----	34	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.12
40: Bonifay-----	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.77
41: Lucy-----	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.05
		Thickest layer	0.00	Thickest layer	0.11
52: Grady-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
54: Albany-----	63	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.12
Ocilla-----	24	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
55: Chipley-----	55	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.68
		Thickest layer	0.00		
Albany-----	27	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.12
Hurricane-----	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.59
		Thickest layer	0.00	Thickest layer	0.63
56: Albany-----	72	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.12
Ocilla-----	16	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
57: Ocilla-----	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.34
Leefield-----	18	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.10

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
61: Lakeland-----	74	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
62: Lakeland-----	77	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
63: Lakeland-----	76	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
64: Lakeland-----	70	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
67: Nankin-----	52	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.01
Cowarts-----	28	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.09
Lakeland-----	17	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
68: Nankin-----	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.01
Cowarts-----	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.03
		Thickest layer	0.00	Bottom layer	0.09
Lakeland-----	16	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
71: Lynchburg-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
72: Lynchburg-----	88	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
85: Searcy-----	56	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
85: Oktibbeha-----	31	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
86: Hannon-----	60	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Oktibbeha-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
87: Clara-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.08 0.36
Plummer-----	30	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.03 0.47
90: Rains-----	56	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.04
Bayboro-----	40	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
91: Orangeburg-----	87	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.01
96: Orangeburg-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.01 0.10
98: Rutlege-----	75	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.10 0.83
99: Water-----	100	Not rated		Not rated	
100: Leon-----	54	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.40 0.79
Chipley-----	32	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.68

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
106: Pantego-----	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.02
Clara-----	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.36
110: Arents-----	86	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.68
		Thickest layer	0.00	Thickest layer	0.68
112: Pottsburg-----	72	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.64
		Thickest layer	0.00	Bottom layer	0.75
113: Pits-----	80	Not rated		Not rated	
Udorthents-----	19	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.16
		Thickest layer	0.00	Thickest layer	0.16
116: Blanton-----	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.69
Lakeland-----	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
117: Blanton-----	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.69
Lakeland-----	38	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
119: Blanton-----	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.71
Lakeland-----	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
121: Goldsboro-----	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.02
122: Goldsboro-----	78	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.02

Soil Survey of Washington County, Florida

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
123: Blanton-----	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.69
Lakeland-----	33	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.61
		Thickest layer	0.00	Bottom layer	0.69
127: Goldsboro-----	74	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.02
128: Blanton-----	70	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.22
		Thickest layer	0.00	Thickest layer	0.69
Bonneau-----	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.03
129: Blanton-----	75	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.22
		Thickest layer	0.00	Thickest layer	0.69
Bonneau-----	25	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.03

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Poor Too sandy Too acid Low content of organic matter Droughty	0.00 0.50 0.50 0.77	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.32
Pickney-----	25	Poor Too sandy Too acid Droughty	0.00 0.50 0.99	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.41
Pamlico-----	19	Fair Too acid	0.12	Poor Wetness depth	0.00	Poor Wetness depth High content of organic matter Too acid	0.00 0.00 0.59
4: Gritney-----	86	Poor Wind erosion Too clayey Low content of organic matter Too acid Water erosion	0.00 0.00 0.12 0.32 0.99	Fair Shrink-swell	0.98	Poor Too clayey Too acid	0.00 0.88
7: Bladen-----	60	Poor Too clayey Too acid Low content of organic matter	0.00 0.05 0.50	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87	Poor Wetness depth Too clayey Too acid	0.00 0.00 0.41
Dunbar-----	25	Poor Wind erosion Low content of organic matter Too acid Too clayey	0.00 0.12 0.32 0.42	Poor Wetness depth Low strength Shrink-swell	0.00 0.10 0.96	Poor Wetness depth Too clayey Too acid	0.00 0.25 0.88
9: Albany-----	38	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.18 0.32 0.76	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.92

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Chipley-----	20	Poor Too sandy Wind erosion Too acid Low content of organic matter Droughty	0.00 0.00 0.05 0.12 0.79	Fair Wetness depth	0.53	Poor Too sandy Wetness depth	0.00 0.53
Leon-----	16	Poor Too sandy Wind erosion Too acid	0.00 0.00 0.39	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.92
11: Dothan-----	93	Poor Wind erosion Low content of organic matter Too acid	0.00 0.02 0.50	Fair Low strength	0.10	Fair Too acid	0.88
12: Dothan-----	88	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.32	Good		Fair Too acid	0.88
14: Dothan-----	87	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Good		Fair Too acid	0.88
18: Fuquay-----	55	Poor Wind erosion Low content of organic matter Too acid	0.00 0.02 0.50	Good		Fair Rock fragments Too acid	0.82 0.88
Dothan-----	25	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Good		Fair Too acid	0.88
22: Nankin-----	52	Fair Too acid Low content of organic matter Too clayey	0.32 0.50 0.99	Fair Low strength	0.10	Fair Too clayey Too acid	0.65 0.88
Cowarts-----	25	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Good		Fair Too acid	0.92

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23: Nankin-----	57	Fair Too acid Low content of organic matter Too clayey	0.32 0.50 0.99	Fair Low strength	0.10	Fair Too clayey Too acid	0.65 0.88
Cowarts-----	21	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Good		Fair Too acid	0.92
29: Dunbar-----	72	Poor Wind erosion Low content of organic matter Too acid Too clayey	0.00 0.12 0.32 0.42	Poor Wetness depth Low strength Shrink-swell	0.00 0.10 0.96	Poor Wetness depth Too clayey Too acid	0.00 0.25 0.88
35: Lucy-----	45	Poor Wind erosion Low content of organic matter Too sandy Too acid	0.00 0.12 0.20 0.50	Good		Fair Too sandy Too acid	0.20 0.92
Troup-----	42	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98
36: Troup-----	45	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98
Lucy-----	40	Poor Wind erosion Low content of organic matter Too acid Too clayey	0.00 0.12 0.50 0.99	Good		Fair Too clayey Too acid	0.57 0.95
39: Bonifay-----	50	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.50 0.54	Good		Poor Too sandy Too acid	0.00 0.98

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39: Fuquay-----	34	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.32	Good		Poor Too sandy Rock fragments Too acid	0.00 0.82 0.98
40: Bonifay-----	80	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.02 0.54	Good		Poor Too sandy Too acid	0.00 0.98
41: Lucy-----	70	Poor Wind erosion Low content of organic matter Too sandy Too acid	0.00 0.12 0.20 0.50	Good		Fair Too sandy Too acid	0.20 0.92
52: Grady-----	85	Poor Too clayey Too acid Low content of organic matter	0.00 0.12 0.50	Poor Wetness depth Low strength Shrink-swell	0.00 0.10 0.87	Poor Too clayey Wetness depth Too acid	0.00 0.00 0.59
54: Albany-----	63	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.18 0.32 0.84	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.92
Ocilla-----	24	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.08 0.32	Fair Wetness depth	0.29	Poor Too sandy Wetness depth Too acid	0.00 0.29 0.88
55: Chipley-----	55	Poor Too sandy Wind erosion Too acid Low content of organic matter Droughty	0.00 0.00 0.05 0.12 0.81	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.98

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Albany-----	27	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.18 0.32 0.84	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.92
Hurricane-----	15	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.20	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.92
56: Albany-----	72	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.18 0.32 0.99	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.92
Ocilla-----	16	Poor Wind erosion Low content of organic matter Too acid	0.00 0.08 0.50	Fair Wetness depth	0.29	Fair Wetness depth Too acid	0.29 0.88
57: Ocilla-----	70	Poor Too sandy Wind erosion Too acid Low content of organic matter	0.00 0.00 0.32 0.50	Fair Wetness depth	0.29	Poor Too sandy Wetness depth Too acid	0.00 0.29 0.88
Leefield-----	18	Poor Wind erosion Too sandy Low content of organic matter Too acid	0.00 0.00 0.05 0.50	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.88
61: Lakeland-----	74	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.29 0.50	Good		Poor Too sandy Slope Too acid	0.00 0.84 0.92

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62: Lakeland-----	77	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.27 0.50	Poor Slope	0.00	Poor Too sandy Slope Too acid	0.00 0.00 0.92
63: Lakeland-----	76	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.32 0.50	Good		Poor Too sandy Too acid	0.00 0.92
64: Lakeland-----	70	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.31 0.50	Good		Poor Too sandy Too acid	0.00 0.92
67: Nankin-----	52	Poor Wind erosion Too acid Low content of organic matter Too clayey	0.00 0.32 0.50 0.99	Fair Low strength	0.10	Fair Too clayey Too acid Slope	0.65 0.88 0.96
Cowarts-----	28	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Good		Fair Too acid Slope	0.92 0.96
Lakeland-----	17	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.30 0.50	Good		Poor Too sandy Too acid Slope	0.00 0.92 0.96
68: Nankin-----	50	Poor Wind erosion Too acid Low content of organic matter Too clayey	0.00 0.32 0.50 0.93	Poor Slope Low strength	0.00 0.10	Poor Slope Too clayey Too acid	0.00 0.61 0.88

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Cowarts-----	30	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.50	Poor Slope	0.00	Poor Slope Too acid	0.00 0.92
Lakeland-----	16	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.27 0.50	Poor Slope	0.00	Poor Too sandy Slope Too acid	0.00 0.00 0.92
71: Lynchburg-----	90	Poor Wind erosion Low content of organic matter Too acid Too clayey	0.00 0.12 0.32 0.98	Poor Wetness depth	0.00	Poor Wetness depth Too clayey Too acid Rock fragments	0.00 0.57 0.88 0.99
72: Lynchburg-----	88	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.32	Poor Low strength Wetness depth	0.00 0.00	Poor Wetness depth Too acid Rock fragments	0.00 0.88 0.99
85: Searcy-----	56	Poor Too clayey Low content of organic matter Too acid	0.00 0.08 0.39	Poor Low strength Wetness depth Shrink-swell	0.00 0.76 0.76	Poor Too clayey Wetness depth Too acid	0.00 0.76 0.92
Oktibbeha-----	31	Poor Too clayey Low content of organic matter Carbonate content	0.00 0.02 0.20	Poor Low strength Shrink-swell	0.00 0.12	Poor Too clayey	0.00
86: Hannon-----	60	Poor Too clayey Low content of organic matter Carbonate content Too acid	0.00 0.12 0.46 0.97	Poor Low strength Shrink-swell	0.00 0.00	Poor Too clayey	0.00
Oktibbeha-----	40	Poor Too clayey Low content of organic matter Carbonate content	0.00 0.18 0.20	Poor Low strength Shrink-swell	0.00 0.12	Poor Too clayey	0.00

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Clara-----	50	Poor Too sandy Low content of organic matter Too acid	0.00 0.12 0.32	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.98
Plummer-----	30	Poor Too sandy Too acid Low content of organic matter	0.00 0.12 0.12	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.59
90: Rains-----	56	Poor Wind erosion Too acid Low content of organic matter	0.00 0.12 0.88	Poor Wetness depth	0.00	Poor Wetness depth Too acid	0.00 0.59
Bayboro-----	40	Fair Too clayey Low content of organic matter Too acid	0.03 0.12 0.50	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.91	Poor Wetness depth Too clayey Too acid	0.00 0.02 0.88
91: Orangeburg-----	87	Poor Wind erosion Low content of organic matter Too acid	0.00 0.24 0.32	Good		Fair Too acid	0.88
96: Orangeburg-----	90	Poor Wind erosion Low content of organic matter Too acid	0.00 0.24 0.50	Good		Fair Too acid	0.88
98: Rutlege-----	75	Poor Too sandy Too acid Low content of organic matter Droughty	0.00 0.50 0.50 0.85	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.32
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Poor Too sandy Wind erosion Too acid	0.00 0.00 0.39	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.92

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100: Chipley-----	32	Poor Too sandy Wind erosion Too acid Low content of organic matter Droughty	0.00 0.00 0.05 0.12 0.83	Fair Wetness depth	0.53	Poor Too sandy Wetness depth Too acid	0.00 0.53 0.98
106: Pantego-----	55	Fair Too acid Low content of organic matter	0.50 0.94	Poor Wetness depth	0.00	Poor Wetness depth Too acid	0.00 0.50
Clara-----	30	Poor Too sandy Low content of organic matter Too acid	0.00 0.12 0.32	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.98
110: Arents-----	86	Poor Too sandy Wind erosion Droughty Too acid Low content of organic matter	0.00 0.00 0.01 0.50 0.88	Fair Wetness depth	0.76	Poor Too sandy Wetness depth Too acid	0.00 0.76 0.92
112: Pottsburg-----	72	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.39	Poor Wetness depth	0.00	Poor Too sandy Wetness depth Too acid	0.00 0.00 0.92
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Fair Low content of organic matter Too sandy Too acid	0.50 0.88 0.97	Fair Shrink-swell	0.87	Poor Slope Too sandy	0.00 0.88
116: Blanton-----	50	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Lakeland-----	40	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.32 0.50	Good		Poor Too sandy Too acid	0.00 0.92
117: Blanton-----	55	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98
Lakeland-----	38	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.30 0.50	Good		Poor Too sandy Too acid	0.00 0.92
119: Blanton-----	70	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Slope Too acid	0.00 0.84 0.98
Lakeland-----	30	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.29 0.50	Good		Poor Too sandy Slope Too acid	0.00 0.84 0.92
121: Goldsboro-----	80	Poor Wind erosion Low content of organic matter Too acid	0.00 0.02 0.50	Fair Wetness depth	0.89	Fair Too acid Wetness depth	0.59 0.89
122: Goldsboro-----	78	Poor Wind erosion Low content of organic matter Too acid	0.00 0.02 0.12	Fair Wetness depth	0.89	Fair Too acid Wetness depth	0.59 0.89

Soil Survey of Washington County, Florida

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123: Blanton-----	60	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Poor Slope	0.00	Poor Too sandy Slope Too acid	0.00 0.00 0.98
Lakeland-----	33	Poor Too sandy Wind erosion Low content of organic matter Droughty Too acid	0.00 0.00 0.12 0.28 0.50	Poor Slope	0.00	Poor Too sandy Slope Too acid	0.00 0.00 0.92
127: Goldsboro-----	74	Poor Wind erosion Low content of organic matter Too acid	0.00 0.02 0.12	Fair Wetness depth	0.89	Fair Too acid Wetness depth	0.59 0.89
128: Blanton-----	70	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98
Bonneau-----	30	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.39	Good		Poor Too sandy Too acid	0.00 0.92
129: Blanton-----	75	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.54	Good		Poor Too sandy Too acid	0.00 0.98
Bonneau-----	25	Poor Wind erosion Low content of organic matter Too acid	0.00 0.12 0.39	Good		Fair Too acid	0.92

Soil Survey of Washington County, Florida

Table 14.--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	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2: Rutlege-----	40	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
Pickney-----	25	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
Pamlico-----	19	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage Hard to pack	1.00 1.00 1.00 1.00	Very limited Cutbanks cave	1.00
4: Gritney-----	86	Somewhat limited Slope Seepage	0.08 0.04	Somewhat limited Piping	0.18	Very limited Depth to water	1.00
7: Bladen-----	60	Not limited		Very limited Depth to saturated zone	1.00	Very limited Slow refill Cutbanks cave	1.00 0.10
Dunbar-----	25	Somewhat limited Seepage	0.05	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.95 0.10
9: Albany-----	38	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Chipley-----	20	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Leon-----	16	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
11: Dothan-----	93	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone	0.02	Very limited Depth to water	1.00

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12: Dothan-----	88	Somewhat limited Seepage Slope	0.70 0.08	Somewhat limited Seepage Depth to saturated zone	0.44 0.02	Very limited Depth to water	1.00
14: Dothan-----	87	Somewhat limited Slope Seepage	0.92 0.70	Somewhat limited Seepage Depth to saturated zone	0.49 0.02	Very limited Depth to water	1.00
18: Fuquay-----	55	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00
Dothan-----	25	Somewhat limited Slope Seepage	0.92 0.70	Somewhat limited Seepage Depth to saturated zone	0.53 0.02	Very limited Depth to water	1.00
22: Nankin-----	52	Somewhat limited Seepage Slope	0.70 0.08	Not limited		Very limited Depth to water	1.00
Cowarts-----	25	Somewhat limited Seepage Slope	0.54 0.08	Somewhat limited Seepage Depth to saturated zone	0.50 0.02	Very limited Depth to water	1.00
23: Nankin-----	57	Somewhat limited Slope Seepage	0.92 0.70	Not limited		Very limited Depth to water	1.00
Cowarts-----	21	Somewhat limited Slope Seepage	0.92 0.54	Somewhat limited Seepage Depth to saturated zone	0.31 0.02	Very limited Depth to water	1.00
29: Dunbar-----	72	Somewhat limited Seepage	0.05	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.95 0.10
35: Lucy-----	45	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
Troup-----	42	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
36: Troup-----	45	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
36: Lucy-----	40	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00
39: Bonifay-----	50	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
Fuquay-----	34	Very limited Seepage	1.00	Somewhat limited Seepage	0.48	Very limited Cutbanks cave Depth to saturated zone Slow refill	1.00 0.81 0.30
40: Bonifay-----	80	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00
41: Lucy-----	70	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
52: Grady-----	85	Not limited		Very limited Depth to saturated zone Ponding	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.97 0.10
54: Albany-----	63	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Ocilla-----	24	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.37	Very limited Cutbanks cave	1.00
55: Chipley-----	55	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Albany-----	27	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Hurricane-----	15	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
56: Albany-----	72	Very limited Seepage Slope	1.00 0.92	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
Ocilla-----	16	Somewhat limited Slope Seepage	0.92 0.70	Very limited Depth to saturated zone Seepage	1.00 0.82	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
57: Ocilla-----	70	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.74	Very limited Cutbanks cave	1.00
Leeffield-----	18	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.99 0.98	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
61: Lakeland-----	74	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
62: Lakeland-----	77	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
63: Lakeland-----	76	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
64: Lakeland-----	70	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00
67: Nankin-----	52	Very limited Slope Seepage	1.00 0.70	Not limited		Very limited Depth to water	1.00
Cowarts-----	28	Very limited Slope Seepage	1.00 0.54	Somewhat limited Seepage Depth to saturated zone	0.39 0.02	Very limited Depth to water	1.00
Lakeland-----	17	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
68: Nankin-----	50	Very limited Slope Seepage	1.00 0.70	Not limited		Very limited Depth to water	1.00

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Cowarts-----	30	Very limited Slope Seepage	1.00 0.02	Somewhat limited Seepage Depth to saturated zone	0.66 0.02	Very limited Depth to water	1.00
Lakeland-----	16	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
71: Lynchburg-----	90	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Cutbanks cave	0.10
72: Lynchburg-----	88	Somewhat limited Seepage Slope	0.70 0.08	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
85: Searcy-----	56	Somewhat limited Slope Seepage	0.08 0.03	Somewhat limited Depth to saturated zone	0.95	Very limited Depth to water	1.00
Oktibbeha-----	31	Somewhat limited Slope	0.08	Somewhat limited Hard to pack	0.98	Very limited Depth to water	1.00
86: Hannon-----	60	Somewhat limited Slope	0.92	Somewhat limited Hard to pack	0.47	Very limited Depth to water	1.00
Oktibbeha-----	40	Somewhat limited Slope	0.92	Very limited Hard to pack	1.00	Very limited Depth to water	1.00
87: Clara-----	50	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
Plummer-----	30	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
90: Rains-----	56	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Somewhat limited Cutbanks cave	0.10
Bayboro-----	40	Not limited		Very limited Depth to saturated zone Ponding	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91: Orangeburg-----	87	Somewhat limited Seepage Slope	0.70 0.08	Not limited		Very limited Depth to water	1.00
96: Orangeburg-----	90	Somewhat limited Slope Seepage	0.92 0.70	Somewhat limited Seepage	0.90	Very limited Depth to water	1.00
98: Rutlege-----	75	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
99: Water-----	100	Not rated		Not rated		Not rated	
100: Leon-----	54	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
Chipley-----	32	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Depth to saturated zone	1.00 0.01
106: Pantego-----	55	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00	Somewhat limited Cutbanks cave	0.10
Clara-----	30	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
110: Arents-----	86	Very limited Seepage Slope	1.00 0.92	Not rated		Very limited Cutbanks cave Depth to saturated zone	1.00 0.02
112: Pottsburg-----	72	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
113: Pits-----	80	Not rated		Not rated		Not rated	
Udorthents-----	19	Very limited Slope Seepage	1.00 0.43	Not rated		Very limited Depth to water	1.00

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Blanton-----	50	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Lakeland-----	40	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
117: Blanton-----	55	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Lakeland-----	38	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Depth to water	1.00
119: Blanton-----	70	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Lakeland-----	30	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
121: Goldsboro-----	80	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Seepage	0.86 0.53	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	0.30 0.10 0.06
122: Goldsboro-----	78	Somewhat limited Seepage Slope	0.70 0.08	Somewhat limited Depth to saturated zone Seepage	0.86 0.35	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	0.30 0.10 0.06
123: Blanton-----	60	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Lakeland-----	33	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00	Very limited Depth to water	1.00
127: Goldsboro-----	74	Somewhat limited Slope Seepage	0.92 0.70	Somewhat limited Depth to saturated zone Seepage	0.86 0.08	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	0.30 0.10 0.06

Soil Survey of Washington County, Florida

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
128: Blanton-----	70	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Bonneau-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.94	Very limited Cutbanks cave Depth to saturated zone Slow refill	1.00 0.90 0.30
129: Blanton-----	75	Very limited Seepage Slope	1.00 0.92	Very limited Seepage	1.00	Very limited Cutbanks cave Depth to saturated zone	1.00 0.81
Bonneau-----	25	Somewhat limited Slope Seepage	0.92 0.70	Somewhat limited Seepage	0.48	Somewhat limited Depth to saturated zone Slow refill Cutbanks cave	0.90 0.30 0.10

Table 15.--Engineering Soil 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	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
2: Rutlege-----	0-10	Loamy sand	SP-SM	A-3	0	0	95-100	95-100	70-100	5-10	0-34	NP-4
	10-80	Sand, loamy sand	SP-SM, SM, SP	A-3, A-2-4	0	0	95-100	95-100	50-80	2-25	0-26	NP-6
Pickney-----	0-20	Loamy sand	SM, SP-SM	A-2-4	0	0	100	100	50-90	10-25	0-57	NP-5
	20-80	Sand, loamy sand	SM, SP-SM, SP	A-2-4, A-3	0	0	100	100	50-90	3-25	0-34	NP-4
Pamlico-----	0-40	Muck	PT	A-8	0	0	100	100	100	100	0-0	NP
	40-80	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	70-95	5-20	0-31	NP-6
4: Gritney-----	0-9	Loamy sand	ML, SC, SC- SM, SM	A-4, A-2-4	0	0	90-100	80-100	60-95	30-90	0-31	NP-10
	9-35	Clay, sandy clay, clay loam	CL, CH, SC	A-7	0	0	95-100	90-100	80-100	45-80	44-67	25-44
	35-45	Sandy clay, clay, clay loam	CH, CL, SC	A-7	0	0	95-100	85-100	85-100	49-98	44-67	25-44
	45-80	Sandy clay loam	SC, CL	A-6, A-2-6	0	0-2	70-100	55-100	30-90	20-60	20-44	6-25
7: Bladen-----	0-5	Sandy loam	SM	A-4, A-2-4	0	0	100	97-100	60-85	20-50	22-46	6-13
	5-30	Clay, sandy clay, clay loam	CH, CL, SC	A-7, A-6	0	0	100	89-99	75-95	45-75	40-64	25-40
	30-54	Clay, sandy clay, clay loam	CH, CL, SC	A-7, A-6	0	0	100	89-99	75-95	45-75	40-63	25-40
	54-80	Clay, sandy clay, clay loam	CH, CL, SC	A-7, A-6	0	0	100	89-99	75-95	45-75	40-63	25-40
Dunbar-----	0-10	Loamy sand	SM, SC, SC- SM	A-2-4	0	0	100	100	50-95	20-50	20-35	2-10
	10-20	Clay loam, sandy clay loam, loam	CL, CL-ML, SC	A-6, A-4	0	0	95-100	90-100	65-98	45-85	27-45	10-25
	20-35	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	39-63	21-40
	35-55	Clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	38-50	20-29
	55-65	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	39-63	21-40
	65-80	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	40-63	25-40

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
9:												
Albany-----	0-3	Loamy sand	SM, SP-SM	A-2-4	0	0	100	100	75-90	10-20	0-31	NP-10
	3-50	Sand, fine sand	SM, SP-SM	A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	50-55	Sand, fine sand	SM, SP-SM	A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	55-80	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM	A-4, A-2	0	0	97-100	95-100	70-100	20-50	16-32	2-13
Chipley-----	0-8	Fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-79	8-12	0-29	NP-2
	8-50	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
	50-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
Leon-----	0-4	Sand	SP-SM	A-3, A-2-4	0	0	100	100	75-79	9-13	0-27	NP-2
	4-10	Sand, fine sand	SP-SM	A-3	0	0	100	100	75-78	6-9	0-17	NP-1
	10-30	Sand, fine sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	76-82	10-17	0-14	NP
	30-35	Sand, fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	80-100	2-12	0-21	NP-3
	35-51	Sand, fine sand, loamy sand	SM, SP-SM, SP	A-2-4, A-3	0	0	100	100	80-100	3-20	0-14	NP
	51-80	Sand, fine sand	SP-SM	A-3,	0	0	100	100	75-78	7-10	0-18	NP-1
11:												
Dothan-----	0-8	Loamy sand	SM	A-2-4	0	0	95-100	86-100	78-100	22-36	0-28	NP-10
	8-10	Loamy sand	SM	A-2-4	0	0	95-100	86-100	65-85	17-30	16-27	2-10
	10-35	Sandy clay loam, fine sandy loam, sandy loam	SC	A-6, A-4, A-2	0	0	95-100	87-100	67-94	32-54	27-44	10-25
	35-80	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, CL	A-6, A-7	0	0	95-100	87-100	61-92	38-66	27-44	12-25
12:												
Dothan-----	0-7	Loamy sand	SM	A-2-4	0	0	95-100	86-100	65-85	17-30	16-28	2-10
	7-39	Sandy clay loam	SM	A-2	0	0	95-100	86-100	78-100	22-36	16-44	2-25
	39-80	Sandy clay loam	SC	A-6, A-2-6	0	0	95-100	87-100	67-94	32-54	27-44	12-25
14:												
Dothan-----	0-6	Loamy sand	SM	A-2-4	0	0	95-100	86-100	65-85	17-30	16-28	2-10
	6-33	Sandy clay loam	SM	A-2	0	0	95-100	86-100	78-100	22-36	16-44	2-25
	33-80	Sandy clay loam	SC, SC-SM	A-6, A-2	0	0	95-100	87-100	67-94	32-54	27-44	12-25
18:												
Fuquay-----	0-4	Sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	86-100	65-83	10-24	0-26	NP-6
	4-12	Sand, loamy sand, loamy fine sand	SM, SC-SM	A-2-4, A-4	0	0	86-100	72-100	54-100	21-54	15-23	1-6
	12-20	Loamy sand, sand, loamy fine sand	SM, SC-SM	A-2-4, A-4	0	0	86-100	72-100	54-100	21-54	15-23	1-6
	20-80	Sandy clay loam, fine sandy loam, sandy loam	SC-SM	A-6, A-4, A-2	0	0	86-100	72-100	52-97	20-52	20-44	6-25

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
18:												
Dothan-----	0-6	Loamy sand	SM	A-2-4	0	0	95-100	86-100	65-85	17-30	16-28	2-10
	6-30	Sandy clay loam	SC	A-2-6	0	0	95-100	86-100	78-100	22-36	16-44	11-25
	30-80	Sandy clay loam	SC, SC-SM	A-6, A-2-6	0	0	95-100	87-100	67-94	32-54	27-44	12-25
22:												
Nankin-----	0-5	Sandy loam	SM, SC-SM	A-4, A-2	0	0	85-100	85-100	70-90	25-45	19-33	3-12
	5-20	Sandy clay, clay	SC	A-7	0	0	98-100	95-100	75-95	40-70	42-58	24-36
	20-56	Sandy clay loam	SC	A-6	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	56-68	Sandy clay loam	SC	A-6	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	68-80	Sandy clay loam	SC	A-6, A-2	0	0	98-100	95-100	70-85	25-55	29-44	13-25
Cowarts-----	0-5	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	5-12	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-4, A-2, A-6	0	0	95-100	90-100	60-95	23-45	21-33	3-13
	12-25	Sandy clay loam, sandy clay	SC	A-6, A-7	0	0	95-100	90-100	60-95	25-50	29-44	13-25
	25-80	Sandy clay loam, sandy loam	SC-SM, SC, CL	A-6, A-2	0	0	85-100	80-100	60-95	25-58	27-40	12-25
23:												
Nankin-----	0-4	Sandy loam	SC-SM,	A-4, A-2	0	0	95-100	92-100	75-90	20-45	21-31	6-10
	4-18	Sandy clay, clay	SC, CL	A-7	0	0	98-100	95-100	75-95	40-70	42-58	24-36
	18-56	Sandy clay loam	SC, CL	A-6, A-7	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	56-68	Sandy clay loam	SC, CL	A-6, A-7	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	68-80	Sandy clay loam	SC, CL	A-6, A-2	0	0	98-100	95-100	70-85	25-55	29-44	13-25
Cowarts-----	0-4	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	4-7	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-4, A-2, A-6	0	0	95-100	90-100	60-95	23-45	21-41	6-21
	7-33	Sandy clay loam, sandy clay	SC, CL	A-7, A-6	0	0	95-100	90-100	60-95	25-50	29-44	13-25
	33-80	Sandy clay loam, sandy loam	SC, SC-SM, CL	A-6, A-2	0	0	85-100	80-100	60-95	25-58	27-44	10-25

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
29: Dunbar-----	0-10	Loamy sand	SC-SM, SC, SM	A-2-4	0	0	100	100	50-95	20-50	20-35	2-10
	10-20	Clay loam, sandy clay loam, loam	CL, CL-ML, SC	A-6, A-4	0	0	95-100	90-100	65-98	45-85	27-45	10-25
	20-35	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	39-63	21-40
	35-55	Clay loam, sandy clay, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	38-50	20-29
	55-65	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	39-63	21-40
	65-80	Sandy clay, clay loam, clay	CL, CH	A-7, A-6	0	0	100	100	85-95	50-70	40-63	25-40
35: Lucy-----	0-6	Sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	8-18	0-25	NP-6
	6-25	Loamy sand, sand, fine sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	7-17	0-27	NP-10
	25-31	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6, A-4	0	0	97-100	95-100	55-95	15-50	25-40	9-21
	31-80	Sandy clay loam	SC, SC-SM	A-2, A-6	0	0	97-100	91-100	61-87	20-42	29-44	13-25
Troup-----	0-11	Sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	85-100	63-83	8-18	0-24	NP-6
	11-71	Sand, loamy sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	85-100	64-84	9-19	0-23	NP-6
	71-80	Sandy clay loam, fine sandy loam, sandy loam	SC-SM, SC	A-2, A-4, A-6	0	0	95-100	85-100	61-91	25-49	24-44	9-25
36: Troup-----	0-10	Sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	85-100	63-83	8-18	0-24	NP-6
	10-55	Sand, loamy sand	SP-SM, SM	A-2-4, A-3	0	0	95-100	85-100	64-84	9-19	0-23	NP-6
	55-80	Sandy clay loam, fine sandy loam, sandy loam	SC-SM, SC	A-2, A-4, A-6	0	0	95-100	85-100	61-91	25-49	24-44	9-25
Lucy-----	0-4	Sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	8-18	0-24	NP-6
	4-17	Loamy sand, sand, fine sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	7-17	0-27	NP-10
	17-26	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6, A-4	0	0	97-100	95-100	55-95	15-50	25-40	9-21
	26-80	Sandy clay loam	SC, SC-SM	A-2, A-6	0	0	97-100	91-100	61-87	20-42	29-44	13-25
39: Bonifay-----	0-5	Sand	SP-SM	A-3, A-2-4	0	0	98-100	98-100	60-95	5-12	0-25	NP-5
	5-32	Sand, loamy sand	SP-SM	A-3, A-2-4	0	0	98-100	98-100	60-95	5-12	0-23	NP-5
	32-50	Loamy sand, sand	SP-SM	A-3, A-2-4	0	0	98-100	98-100	60-95	5-12	0-28	NP-10
	50-80	Sandy clay loam, sandy loam, fine sandy loam	SC, CL, SC- SM	A-6, A-4, A-2	0	0	95-100	90-100	63-95	23-50	24-44	9-25

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
39: Fuquay-----	0-7	Sand	SM, SP-SM	A-2-4, A-3	0	0	95-100	86-100	65-83	10-24	0-26	NP-6
	7-31	Sand, loamy sand, loamy fine sand	SM, SC-SM	A-2-4, A-4	0	0	86-100	72-100	54-100	21-54	15-23	1-6
	31-36	Loamy sand, sand, loamy fine sand	SM, SC-SM	A-2-4, A-4	0	0	86-100	72-100	54-100	21-54	15-23	1-6
	36-50	Sandy clay loam, fine sandy loam, sandy loam	SC-SM	A-2, A-4, A-6	0	0	86-100	72-100	54-100	21-54	20-44	6-25
	50-80	Sandy clay loam, fine sandy loam, sandy loam	SC-SM	A-6, A-4, A-2	0	0	86-100	72-100	52-97	20-52	20-44	6-25
40: Bonifay-----	0-3	Loamy sand	SM	A-2-4	0	0	98-100	98-100	65-95	13-20	0-14	NP
	3-28	Sand, loamy sand	SP-SM	A-2-4, A-3	0	0	98-100	98-100	60-95	5-12	0-23	NP-5
	28-43	Loamy sand, sand	SP-SM	A-2-4, A-3	0	0	98-100	98-100	60-95	5-12	0-28	NP-10
	43-80	Sandy clay loam, sandy loam, fine sandy loam	SC, CL, SC- SM	A-6, A-4, A-2	0	0	95-100	90-100	63-95	23-50	24-44	9-25
41: Lucy-----	0-10	Sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	8-18	0-25	NP-6
	10-28	Loamy sand, sand, fine sand	SM, SP-SM	A-2-4	0	0	95-100	85-100	63-83	7-17	0-27	NP-10
	28-35	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6, A-4	0	0	97-100	95-100	55-95	15-50	25-40	9-21
	35-80	Sandy clay loam	SC, SC-SM	A-2, A-6	0	0	97-100	91-100	61-87	20-42	29-44	13-25
52: Grady-----	0-8	Loam	CL-ML, CL, ML	A-6, A-4	0	0	100	99-100	85-100	50-75	20-45	3-18
	8-16	Sandy clay loam	CL	A-6	0	0	100	100	90-100	55-90	31-47	13-25
	16-45	Clay, sandy clay	CH	A-7, A-6	0	0	100	100	90-100	55-90	30-60	32-47
	45-80	Clay, sandy clay	CL, CH	A-7	0	0	100	100	90-100	55-90	44-64	25-40
54: Albany-----	0-3	Loamy sand	SM, SP-SM	A-2-4	0	0	100	100	75-90	10-20	0-31	NP-10
	3-53	Sand, fine sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	53-80	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM	A-2-6, A-6, A-4, A-2-4	0	0	97-100	95-100	70-100	20-50	16-32	2-13
Ocilla-----	0-5	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-26	NP-4
	5-25	Sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-21	NP-4
	25-60	Sandy clay loam, fine sandy loam, sandy loam	SC, CL, SM	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	3-25
	60-80	Sandy clay loam, fine sandy loam, sandy loam	SC, CL	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	9-25

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
55:												
Chipley-----	0-10	Fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-79	8-12	0-29	NP-2
	10-49	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
	49-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
Albany-----	0-2	Loamy sand	SM, SP-SM	A-2-4	0	0	100	100	75-90	10-20	0-31	NP-10
	2-51	Sand, fine sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	51-53	Sand, fine sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	53-80	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM	A-2-6, A-6, A-4, A-2-4	0	0	97-100	95-100	70-100	20-50	16-32	2-13
Hurricane-----	0-6	Sand	SP-SM	A-3	0	0	100	100	76-79	10-13	0-21	NP-1
	6-35	Sand, fine sand	SP-SM	A-3	0	0	100	100	76-79	9-12	0-18	NP-1
	35-55	Sand, fine sand	SP-SM	A-3	0	0	100	100	76-79	9-12	0-18	NP-1
	55-80	Fine sand, sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	76-82	9-15	0-14	NP
56:												
Albany-----	0-2	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	75-90	10-20	0-31	NP-10
	2-47	Sand, fine sand	SM, SP-SM	A-3, A-2-4	0	0	100	100	75-90	10-20	0-21	NP-4
	47-80	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM	A-2, A-6, A-4	0	0	97-100	95-100	70-100	20-50	16-32	2-13
Ocilla-----	0-3	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-26	NP-4
	3-14	Sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-21	NP-4
	14-35	Sandy clay loam, fine sandy loam, sandy loam	SC, CL, SM	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	3-25
	35-80	Sandy clay loam, fine sandy loam, sandy loam	SC, CL	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	9-25
57:												
Ocilla-----	0-5	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-26	NP-4
	5-39	Sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	95-100	70-100	8-35	0-21	NP-4
	39-62	Sandy clay loam, fine sandy loam, sandy loam	SC, CL, SM	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	3-25
	62-80	Sandy clay loam, fine sandy loam, sandy loam	SC, CL	A-6, A-4, A-2	0	0	100	95-100	80-100	20-55	25-44	9-25
Leefield-----	0-5	Loamy sand	SM	A-2-4	0	0	98-100	93-100	70-82	20-29	0-27	NP-6
	5-30	Loamy sand, sand, loamy fine sand	SM	A-2-4	0	0	98-100	93-100	72-85	14-22	0-26	NP-6
	30-33	Sandy loam, sandy clay loam	SC, SC-SM	A-2, A-4, A-6	0	0	95-100	89-100	62-80	24-37	25-36	9-17
	33-80	Sandy clay loam, sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	95-100	90-100	69-92	28-46	24-40	9-21

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
61: Lakeland-----	0-4	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	4-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
62: Lakeland-----	0-2	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	2-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
63: Lakeland-----	0-7	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	7-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
64: Lakeland-----	0-6	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	6-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
67: Nankin-----	0-3	Sandy loam	SM, SC-SM	A-4, A-2	0	0	85-100	85-100	70-90	25-45	19-33	3-12
	3-16	Sandy clay, clay	SC, CL, CH	A-7	0	0	98-100	95-100	75-95	40-70	42-58	24-36
	16-56	Sandy clay loam	SC, CL	A-6, A-7	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	56-71	Sandy clay loam	SC, CL	A-7, A-6	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	71-80	Sandy clay loam	SC, CL	A-6, A-2	0	0	98-100	95-100	70-85	25-55	29-44	13-25
Cowarts-----	0-4	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	4-30	Sandy clay loam, sandy clay	SC, CL	A-6, A-7	0	0	95-100	90-100	60-95	25-50	29-44	13-25
	30-80	Sandy clay loam, sandy loam	SC-SM, SC, CL-ML, CL	A-2-6, A-4, A-6	0	0	85-100	80-100	60-95	25-58	27-40	10-25
Lakeland-----	0-5	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	5-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
68: Nankin-----	0-2	Sandy loam	SC-SM	A-4, A-2	0	0	85-100	85-100	70-90	25-45	19-33	3-12
	2-14	Sandy clay, clay	SC, CL, CH	A-7	0	0	98-100	95-100	75-95	40-70	42-58	24-36
	14-24	Sandy clay loam	SC, CL	A-7, A-6	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	24-67	Sandy clay loam	SC, CL	A-7, A-6	0	0	98-100	95-100	75-95	40-70	34-45	17-25
	67-80	Sandy clay loam	SC, CL	A-6, A-2	0	0	98-100	95-100	70-85	25-55	29-44	13-25
Cowarts-----	0-3	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-26	NP-6
	3-18	Sandy clay loam, sandy clay	SC, CL	A-6, A-7	0	0	95-100	90-100	60-95	25-50	29-44	13-25
	18-80	Sandy clay loam, sandy loam	SC-SM, SC, CL	A-2-6, A-4, A-6	0	0	85-100	80-100	60-95	25-58	27-40	9-25

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
68: Lakeland-----	0-2	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	2-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
71: Lynchburg-----	0-10	Loamy fine sand	SM	A-2-4	0	0	92-100	83-100	61-82	18-29	0-26	NP-6
	10-16	Loamy sand, fine sandy loam, sand	SM, SC-SM	A-2-4, A-4	0	0	92-100	82-100	68-97	24-42	17-29	2-10
	16-19	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	91-100	81-100	63-95	33-58	27-44	12-25
	19-60	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	91-100	81-100	63-95	33-58	27-44	12-25
	60-80	Sandy clay, clay loam, clay	CL, SC, SC-SM	A-7, A-6	0	0	95-100	86-100	66-100	42-72	35-57	18-36
72: Lynchburg-----	0-5	Loamy fine sand	SM	A-2-4	0	0	92-100	83-100	61-82	18-29	0-26	NP-6
	5-10	Loamy sand, fine sandy loam, sand	SM, SC-SM	A-2-4, A-4	0	0	92-100	82-100	68-97	24-42	17-29	2-10
	10-25	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	91-100	81-100	63-95	33-58	27-44	12-25
	25-45	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2	0	0	91-100	81-100	63-95	33-58	27-44	12-25
	45-80	Sandy clay, clay loam, clay	SC, CL, SC-SM	A-7, A-6	0	0	95-100	86-100	66-100	42-72	35-57	18-36
85: Searcy-----	0-2	Sandy loam	SC, CL, ML, SC-SM	A-6, A-4	0	0	95-100	95-100	80-95	35-75	20-41	2-14
	2-5	Sandy clay loam	CL, SC	A-7, A-6	0	0	95-100	95-100	80-100	36-70	31-46	13-25
	5-50	Clay, clay loam	CH, CL, SC	A-7, A-6	0	0	95-100	95-100	80-100	36-70	35-54	17-32
	50-80	Clay, sandy clay, silty clay	CH, SC	A-7	0	0	95-100	95-100	90-100	35-75	54-69	32-44
Oktibbeha-----	0-4	Clay	CL	A-7	0	0	100	95-100	90-100	70-100	43-70	18-35
	4-12	Clay	CH	A-7	0	0	100	95-100	95-100	95-100	68-89	44-59
	12-30	Clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-78	36-51
	30-45	Clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-77	36-51
	45-80	Silty clay, clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-77	36-51
86: Hannon-----	0-5	Clay loam	CH, CL	A-7	0	0	100	100	90-100	90-100	40-59	19-29
	5-10	Clay	CH	A-7	0	0	100	100	95-100	90-100	52-82	29-46
	10-25	Clay	CH	A-7	0	0	100	100	95-100	90-100	60-93	37-57
	25-80	Clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	90-100	85-95	38-52	19-29

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
86:												
Oktibbeha-----	0-2	Clay	CL	A-7	0	0	100	95-100	90-100	70-100	43-70	18-35
	2-15	Clay	CH	A-7	0	0	100	95-100	95-100	95-100	68-89	44-59
	15-39	Clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-78	36-51
	39-55	Clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-77	36-51
	55-80	Silty clay, clay	CH	A-7	0	0-5	95-100	90-100	90-100	90-100	58-77	36-51
87:												
Clara-----	0-6	Sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-17	NP-1
	6-20	Fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-17	NP-1
	20-60	Fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-20	NP-3
	60-80	Fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-16	0-25	NP-7
Plummer-----	0-3	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	75-81	10-17	0-42	NP-4
	3-47	Sand, loamy sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	76-82	10-16	0-20	NP-4
	47-59	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SC	A-4, A-2-4	0	0	100	97-100	76-93	29-45	24-40	9-21
	59-80	Sandy clay loam, fine sandy loam, sandy loam	SC, SC-SM	A-6, A-4, A-2-4	0	0	100	97-100	74-91	28-44	24-40	9-21
90:												
Rains-----	0-5	Loamy sand	SM, SC	A-2-4, A-4	0	0	95-100	86-100	60-81	28-44	0-39	NP-9
	5-15	Sandy loam	SM, SC	A-2-4, A-4	0	0	95-100	86-100	61-82	29-45	19-33	3-12
	15-55	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, CL	A-6, A-2	0	0	100	95-100	73-94	35-56	28-45	12-25
	55-80	Sandy clay loam, clay loam, sandy clay	CL, SC, SC-SM	A-7, A-6	0	0	100	98-100	66-89	33-56	28-45	12-25
Bayboro-----	0-14	Loam	ML, CL-ML	A-4	0	0	100	100	70-85	40-55	27-58	3-18
	14-30	Clay loam, sandy clay, clay	CH, CL	A-7, A-6	0	0	100	100	85-100	55-95	37-51	19-29
	30-80	Clay	CL, CH	A-7	0	0	100	100	85-100	55-95	48-67	28-44
91:												
Orangeburg-----	0-5	Loamy sand	SM	A-2-4	0	0	98-100	95-100	60-87	14-28	16-24	1-6
	5-10	Sandy loam	SM	A-2	0	0	98-100	95-100	60-87	14-28	18-32	3-13
	10-75	Sandy clay loam	SC, SC-SM, CL	A-6	0	0	98-100	95-100	71-96	38-58	29-44	13-25
	75-80	Sandy clay	SC, SC-SM, CL	A-7	0	0	98-100	95-100	71-96	38-58	42-61	24-39

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
96: Orangeburg-----	0-3	Loamy sand	SM	A-2-4	0	0	98-100	95-100	60-87	14-28	16-24	1-6
	3-80	Sandy clay loam	SC, SC-SM, CL	A-6, A-7	0	0	98-100	95-100	71-96	38-58	29-44	13-25
98: Rutlege-----	0-15	Loamy fine sand	SM	A-2-4	0	0	90-100	85-100	50-80	13-30	0-42	NP-6
	15-80	Sand, loamy sand	SP-SM, SM, SP	A-3, A-2-4	0	0	95-100	95-100	50-80	2-25	0-26	NP-6
99: Water.												
100: Leon-----	0-4	Sand	SP-SM	A-3, A-2-4	0	0	100	100	75-79	9-13	0-27	NP-2
	4-10	Sand, fine sand	SP-SM	A-3	0	0	100	100	75-78	6-9	0-17	NP-1
	10-30	Sand, fine sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	76-82	10-17	0-14	NP
	30-35	Sand, fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	80-100	2-12	0-21	NP-3
	35-51	Sand, fine sand, loamy sand	SM, SP-SM, SP	A-2-4, A-3	0	0	100	100	80-100	3-20	0-14	NP
	51-80	Sand, fine sand	SP-SM	A-3	0	0	100	100	75-78	7-10	0-18	NP-1
Chipley-----	0-12	Fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-79	8-12	0-29	NP-2
	12-53	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
	53-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	100	100	75-81	8-14	0-20	NP-4
106: Pantego-----	0-18	Sandy loam	SM	A-4, A-2	0	0	100	95-100	81-95	30-42	25-41	2-9
	18-80	Sandy clay loam, sandy loam, clay loam	SC, CL	A-6, A-4, A-2	0	0	100	94-100	74-95	35-59	27-47	10-24
Clara-----	0-6	Sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-17	NP-1
	6-20	Fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-17	NP-1
	20-60	Fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	85-100	2-12	0-20	NP-3
	60-80	Fine sand	SP-SM, SP, SM	A-3, A-2-4	0	0	100	100	85-100	2-16	0-25	NP-7
110: Arents-----	0-80	Sand	SP-SM, SP	A-3	0	0	100	100	85-99	0-5	0-20	NP-2
112: Pottsburg-----	0-12	Sand	SP-SM	A-3	0	0	100	100	77-80	9-12	0-24	NP-1
	12-60	Sand, fine sand	SP-SM, SM	A-3	0	0	100	100	76-80	9-13	0-18	NP-1
	60-80	Sand, fine sand, loamy sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	75-80	7-13	0-14	NP

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
113: Pits.												
Udorthents-----	0-80	Sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-2-4, A-6	0	0-3	95-100	90-100	70-98	30-90	22-34	6-14
116: Blanton-----	0-6	Sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	6-56	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	56-61	Sandy loam, loamy fine sand, fine sandy loam, loamy sand	SM	A-2-4,	0	0	100	95-100	76-88	22-31	18-30	3-12
	61-80	Sandy loam, sandy clay loam	SC, SC-SM, SM	A-6, A-4, A- 2-6, A-2-4	0	0	100	95-100	69-100	25-50	18-32	3-13
Lakeland-----	0-7	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	7-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
117: Blanton-----	0-5	Sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	5-50	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	50-63	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM	A-2-4,	0	0	100	95-100	76-88	22-31	20-30	3-12
	63-80	Sandy clay loam, sandy loam, sandy clay	SC, SC-SM	A-6, A-4, A-2	0	0	100	95-100	69-100	25-50	22-49	7-28
Lakeland-----	0-6	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	6-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
119: Blanton-----	0-4	Fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	4-46	Fine sand, sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	46-52	Sandy loam, loamy fine sand, fine sandy loam	SC-SM, SM	A-2-4	0	0	100	95-100	76-88	22-31	20-32	3-13
	52-80	Sandy clay loam	SC	A-6, A-2-6	0	0	100	95-100	69-100	25-50	29-44	13-25
Lakeland-----	0-4	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	4-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
121: Goldsboro-----	0-9	Loamy sand	SM	A-2-4	0	0	95-100	91-100	68-81	15-22	0-27	NP-4
	9-16	Loamy sand, loamy fine sand	SM	A-2-4	0	0	95-100	91-100	82-97	22-30	0-23	NP-6
	16-35	Sandy clay loam, sandy loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24
	35-80	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24
122: Goldsboro-----	0-7	Loamy sand	SM	A-2-4	0	0	95-100	91-100	68-81	15-22	0-27	NP-4
	7-12	Loamy sand, loamy fine sand	SM	A-2-4	0	0	95-100	91-100	82-97	22-30	0-23	NP-6
	12-40	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24
	40-80	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24
123: Blanton-----	0-3	Sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	3-43	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	43-52	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM, SC-SM	A-2-4	0	0	100	95-100	76-88	22-31	20-30	3-12
	52-80	Sandy clay loam, sandy loam, sandy clay	SC, SC-SM, CL	A-6, A-4, A-2	0	0	100	95-100	69-100	25-50	22-49	7-28
Lakeland-----	0-3	Sand	SP-SM	A-3, A-2-4	0	0	90-100	81-100	62-83	8-16	0-22	NP-4
	3-80	Sand, fine sand	SP-SM	A-3, A-2-4	0	0	91-100	81-100	62-81	7-14	0-20	NP-3
127: Goldsboro-----	0-5	Loamy sand	SM	A-2-4	0	0	95-100	91-100	68-81	15-22	0-27	NP-4
	5-7	Loamy sand, loamy fine sand	SM	A-2-4	0	0	95-100	91-100	82-97	22-30	0-23	NP-6
	7-49	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24
	49-80	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	93-100	73-95	31-50	27-43	10-24

Table 15.--Engineering Soil Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
128:												
Blanton-----	0-6	Fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	6-46	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	46-54	Sandy loam, loamy fine sand, fine sandy loam, loamy sand	SC	A-2-4	0	0	100	95-100	76-88	22-31	18-32	4-13
	54-80	Sandy loam	SC, SC-SM, SM	A-6, A-4, A-2	0	0	100	95-100	69-100	25-50	18-30	3-12
Bonneau-----	0-6	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	60-95	8-20	0-25	NP-4
	6-25	Sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	60-95	8-20	0-21	NP-4
	25-48	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-4, A-2, A-6	0	0	100	100	91-100	30-49	24-40	9-21
	48-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM	A-6, A-2	0	0	100	100	60-100	30-50	27-44	12-25
129:												
Blanton-----	0-5	Sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	8-15	0-26	NP-4
	5-50	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	90-100	67-81	7-14	0-20	NP-4
	50-52	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM, SC-SM	A-2-4,	0	0	100	95-100	76-88	22-31	18-30	3-12
	52-80	Sandy loam	SC, SC-SM, SM	A-6, A-4, A-2	0	0	100	95-100	69-100	25-50	18-32	3-13
Bonneau-----	0-3	Sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	60-95	8-20	0-25	NP-4
	3-15	Sand, fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	60-95	8-20	0-21	NP-4
	15-54	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM	A-4, A-2, A-6	0	0	100	100	91-100	30-49	24-40	9-21
	54-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM	A-6, A-2	0	0	100	100	60-100	30-50	27-44	12-25

Table 16.--Physical Soil Properties

[Entries under "Clay" are low, representative, and high values. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
2:												
Rutlege-----	0-10	1- 3- 8	1.30-1.50	42.00-141.00	0.04-0.10	0.0-2.9	3.0-6.0	.10	.10	5	8	0
	10-80	1- 1-10	1.50-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.2-2.0	.17	.17			
Pickney-----	0-20	2- 8- 9	1.20-1.40	42.00-141.00	0.06-0.10	0.0-2.9	3.0-16	.10	.10	5	8	0
	20-80	1- 6- 8	1.40-1.60	42.00-141.00	0.03-0.11	0.0-2.9	2.0-6.0	.10	.10			
Pamlico-----	0-40	0- 0- 0	0.20-0.65	4.00-42.00	0.24-0.40	0.0-0.0	20-60	---	---	2	8	0
	40-80	3- 4-10	1.60-1.75	42.00-141.00	0.10-0.20	0.0-2.9	1.0-4.0	.10	.10			
4:												
Gritney-----	0-9	3- 7-15	1.30-1.50	42.35-141.18	0.08-0.12	0.0-2.9	0.5-2.0	.24	.24	4	2	134
	9-35	35-48-60	1.30-1.50	0.42-1.40	0.10-0.17	3.0-5.9	0.1-0.5	.37	.37			
	35-45	35-46-60	1.30-1.55	0.42-1.41	0.10-0.15	3.0-5.9	0.1-0.5	.32	.32			
	45-80	10-28-35	1.30-1.50	1.41-4.24	0.06-0.12	0.0-2.9	0.0-0.1	.20	.10			
7:												
Bladen-----	0-5	10-16-20	1.35-1.45	4.00-14.00	0.10-0.13	0.0-2.9	1.0-7.0	.28	.28	5	3	86
	5-30	35-48-55	1.60-1.70	0.42-1.40	0.12-0.16	3.0-5.9	0.2-1.0	.28	.28			
	30-54	35-43-55	1.60-1.70	0.42-1.40	0.12-0.16	3.0-5.9	0.1-0.5	.28	.28			
	54-80	35-49-55	1.60-1.70	0.42-1.40	0.12-0.16	3.0-5.9	0.1-0.5	.24	.24			
Dunbar-----	0-10	5-12-15	1.45-1.65	14.00-42.00	0.10-0.15	0.0-2.9	2.0-4.0	.24	.24	5	2	134
	10-20	18-27-35	1.35-1.50	1.40-4.00	0.14-0.19	0.0-2.9	0.0-1.0	.28	.28			
	20-35	30-35-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	35-55	29-40-40	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	55-65	30-45-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	65-80	35-41-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
9:												
Albany-----	0-3	1- 8-15	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	1.0-2.0	.10	.10	5	2	134
	3-50	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	50-55	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	55-80	5-18-20	1.55-1.65	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24			
Chipley-----	0-8	1- 3- 5	1.35-1.45	42.00-141.00	0.05-0.10	0.0-2.9	2.0-5.0	.10	.10	5	1	180
	8-50	1- 3- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			
	50-80	0- 1- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
9: Leon-----	0-4	1- 3- 5	1.30-1.45	42.00-141.00	0.05-0.15	0.0-2.9	0.5-4.0	.10	.10	5	1	180
	4-10	0- 2- 3	1.40-1.60	42.00-141.00	0.02-0.05	0.0-2.9	0.0-0.5	.10	.10			
	10-30	2- 4- 8	1.25-1.65	4.00-42.00	0.15-0.30	0.0-2.9	2.0-4.0	.15	.15			
	30-35	1- 2- 6	1.40-1.65	14.00-141.00	0.02-0.05	0.0-2.9	0.1-1.0	.10	.10			
	35-51	2- 4- 8	1.50-1.70	4.00-42.00	0.05-0.10	0.0-2.9	2.0-4.0	.15	.15			
	51-80	1- 2- 4	1.50-1.65	14.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
11: Dothan-----	0-8	3- 5-15	1.30-1.60	14.00-42.00	0.06-0.10	0.0-2.9	0.1-1.0	.20	.20	5	2	134
	8-10	5-10-15	1.30-1.60	14.00-42.00	0.06-0.10	0.0-2.9	0.1-0.5	.15	.15			
	10-35	18-23-35	1.40-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	35-80	18-28-35	1.45-1.70	1.40-4.00	0.08-0.12	0.0-2.9	0.0-0.2	.28	.28			
12: Dothan-----	0-7	5- 7-15	1.30-1.60	14.00-42.00	0.06-0.10	0.0-2.9	0.1-1.0	.15	.15	5	2	134
	7-39	5-21-35	1.30-1.60	4.00-14.00	0.06-0.10	0.0-2.9	0.1-0.5	.15	.15			
	39-80	18-23-35	1.40-1.60	1.40-4.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
14: Dothan-----	0-6	5- 7-15	1.30-1.60	14.00-42.00	0.06-0.10	0.0-2.9	0.1-1.0	.15	.15	5	2	134
	6-33	5-21-35	1.30-1.60	4.00-14.00	0.06-0.10	0.0-2.9	0.1-0.5	.15	.15			
	33-80	18-23-35	1.40-1.60	1.40-4.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
18: Fuquay-----	0-4	2- 4-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	5	1	180
	4-12	4- 5-10	1.40-1.60	42.00-141.00	0.12-0.15	0.0-2.9	0.0-0.4	.10	.10			
	12-20	4- 8-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.10	.10			
	20-80	10-23-35	1.40-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.2	.20	.20			
Dothan-----	0-6	5- 7-15	1.30-1.60	14.00-42.00	0.06-0.10	0.0-2.9	0.1-1.0	.15	.15	5	2	134
	6-30	5-21-35	1.30-1.60	4.00-14.00	0.06-0.10	0.0-2.9	0.1-0.5	.15	.15			
	30-80	18-23-35	1.40-1.60	1.40-4.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
22: Nankin-----	0-5	7-14-20	1.45-1.55	14.00-42.00	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	5	3	86
	5-20	35-42-50	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	20-56	25-30-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	56-68	25-32-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	68-80	20-25-35	1.60-1.70	4.00-14.00	0.10-0.15	0.0-2.9	0.1-0.5	.24	.24			
Cowarts-----	0-5	3- 8-10	1.30-1.70	14.11-42.35	0.06-0.10	0.0-2.9	0.5-2.0	.17	.17	5	2	134
	5-12	10-14-20	1.30-1.50	4.23-14.11	0.10-0.16	0.0-2.9	0.2-1.0	.24	.24			
	12-25	20-26-35	1.30-1.50	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	25-80	18-28-35	1.45-1.75	0.42-4.23	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
23:												
Nankin-----	0-4	10-14-18	1.30-1.70	14.00-42.00	0.08-0.13	0.0-2.9	0.5-1.0	.28	.28	5	3	86
	4-18	35-42-50	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	18-56	25-30-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	56-68	25-32-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	68-80	20-25-35	1.60-1.70	4.00-14.00	0.10-0.15	0.0-2.9	0.1-0.5	.24	.24			
Cowarts-----	0-4	3- 7-10	1.30-1.70	14.11-42.35	0.06-0.10	0.0-2.9	0.5-2.0	.17	.17	5	2	134
	4-7	10-19-30	1.30-1.50	4.23-14.11	0.10-0.16	0.0-2.9	0.2-1.0	.24	.24			
	7-33	20-26-35	1.30-1.50	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	33-80	18-28-35	1.45-1.75	0.42-4.23	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24			
29:												
Dunbar-----	0-10	5-12-15	1.45-1.65	14.00-42.00	0.10-0.15	0.0-2.9	2.0-4.0	.24	.24	5	2	134
	10-20	18-27-35	1.35-1.50	1.40-4.00	0.14-0.19	0.0-2.9	0.0-1.0	.28	.28			
	20-35	30-35-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	35-55	29-40-40	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	55-65	30-45-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
	65-80	35-41-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.28	.28			
35:												
Lucy-----	0-6	1- 5-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.3	.10	.10	5	1	180
	6-25	1-10-15	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.1-0.5	.10	.10			
	25-31	15-17-30	1.60-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
	31-80	20-31-35	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
Troup-----	0-11	1- 5-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	11-71	1- 6-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.1-0.5	.10	.10			
	71-80	15-20-35	1.40-1.60	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.2	.20	.20			
36:												
Troup-----	0-10	1- 5-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	10-55	1- 6-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.1-0.5	.10	.10			
	55-80	15-20-35	1.40-1.60	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.2	.20	.20			
Lucy-----	0-4	1- 5-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	4-17	1-10-15	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.1-0.5	.10	.10			
	17-26	15-17-30	1.60-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
	26-80	20-31-35	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
39:												
Bonifay-----	0-5	2- 3- 9	1.35-1.60	42.34-141.14	0.03-0.08	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	5-32	3- 4- 9	1.35-1.60	42.34-141.14	0.03-0.08	0.0-2.9	0.2-0.8	.10	.10			
	32-50	3- 8-15	1.35-1.60	42.34-141.14	0.03-0.08	0.0-2.9	0.2-0.8	.10	.10			
	50-80	15-24-35	1.60-1.70	1.41-4.23	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
39: Fuquay-----	0-7	2- 4-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	5	1	180
	7-31	4- 5-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.10	.10			
	31-36	4- 8-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.10	.10			
	36-50	10-25-35	1.40-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.4	.20	.20			
	50-80	10-23-35	1.40-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.2	.20	.20			
40: Bonifay-----	0-3	3- 4-12	1.50-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	3-28	3- 4- 9	1.35-1.60	42.34-141.14	0.03-0.08	0.0-2.9	0.2-0.8	.10	.10			
	28-43	3- 8-15	1.35-1.60	42.34-141.14	0.03-0.08	0.0-2.9	0.2-0.8	.10	.10			
	43-80	15-24-35	1.60-1.70	1.41-4.23	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24			
41: Lucy-----	0-10	1- 5-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.3	.10	.10	5	1	180
	10-28	1-10-15	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.1-0.5	.10	.10			
	28-35	15-17-30	1.60-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
	35-80	20-31-35	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	0.1-0.5	.24	.24			
52: Grady-----	0-8	7-22-27	1.20-1.45	1.40-4.00	0.10-0.18	0.0-2.9	1.0-4.0	.24	.24	5	6	48
	8-16	20-32-35	1.50-1.60	0.42-1.40	0.12-0.16	3.0-5.9	0.2-0.8	.10	.10			
	16-45	45-55-65	1.50-1.60	0.42-1.40	0.12-0.16	3.0-5.9	0.2-0.8	.10	.10			
	45-80	35-50-55	1.50-1.60	0.42-1.40	0.12-0.16	3.0-5.9	0.2-0.8	.17	.17			
54: Albany-----	0-3	1- 8-15	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	1.0-2.0	.10	.10	5	1	180
	3-53	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	53-80	5-18-20	1.55-1.65	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24			
Ocilla-----	0-5	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	5-25	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	0.0-2.9	0.2-0.8	.10	.10			
	25-60	15-22-35	1.60-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.1-0.3	.24	.24			
	60-80	15-29-35	1.60-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.1-0.3	.24	.24			
55: Chipley-----	0-10	1- 3- 5	1.35-1.45	42.00-141.00	0.05-0.10	0.0-2.9	2.0-5.0	.10	.10	5	1	180
	10-49	1- 3- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			
	49-80	0- 1- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			
Albany-----	0-2	1- 8-15	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	1.0-2.0	.10	.10	5	1	180
	2-51	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	51-53	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	53-80	5-18-20	1.55-1.65	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
55: Hurricane-----	0-6	1- 2- 4	1.40-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	6-35	1- 3- 4	1.40-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10			
	35-55	1- 2- 4	1.40-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10			
	55-80	2- 4- 8	1.55-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-3.0	.15	.15			
56: Albany-----	0-2	1- 8-15	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	1.0-2.0	.10	.10	5	2	134
	2-47	1- 2- 8	1.40-1.55	42.34-141.14	0.02-0.04	0.0-2.9	0.1-0.5	.10	.10			
	47-80	5-18-20	1.55-1.65	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.24	.24			
	Ocilla-----	0-3	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	1.0-3.0	.10	.10	5	2	134
		3-14	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	0.2-0.8	.10	.10			
		14-35	15-22-35	1.60-1.70	4.00-14.00	0.09-0.12	0.1-0.3	.24	.24			
		35-80	15-29-35	1.60-1.70	4.00-14.00	0.09-0.12	0.1-0.3	.24	.24			
57: Ocilla-----	0-5	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	5-39	2- 4- 7	1.40-1.50	14.00-141.00	0.05-0.07	0.0-2.9	0.2-0.8	.10	.10			
	39-62	15-22-35	1.60-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.1-0.3	.24	.24			
	62-80	15-29-35	1.60-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.1-0.3	.24	.24			
	Leefield-----	0-5	3- 5-10	1.45-1.60	42.00-141.00	0.04-0.07	1.0-2.2	.10	.10	5	2	134
		5-30	3- 8-10	1.45-1.60	42.00-141.00	0.04-0.07	1.0-2.0	.10	.10			
		30-33	15-18-25	1.50-1.65	4.00-14.00	0.10-0.13	0.1-0.5	.17	.17			
		33-80	15-22-30	1.50-1.70	1.40-4.00	0.08-0.12	0.0-0.3	.20	.20			
61: Lakeland-----	0-4	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	4-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
62: Lakeland-----	0-2	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	2-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
63: Lakeland-----	0-7	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	7-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
64: Lakeland-----	0-6	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	6-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
67:												
Nankin-----	0-3	7-14-20	1.45-1.55	14.00-42.00	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	5	2	134
	3-16	35-42-50	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	16-56	25-30-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	56-71	25-32-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	71-80	20-25-35	1.60-1.70	4.00-14.00	0.10-0.15	0.0-2.9	0.1-0.5	.24	.24			
Cowarts-----	0-4	3- 8-10	1.30-1.70	14.11-42.35	0.06-0.10	0.0-2.9	0.5-2.0	.17	.17	5	2	134
	4-30	20-26-35	1.30-1.50	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	30-80	18-28-35	1.45-1.75	0.42-4.23	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24			
Lakeland-----	0-5	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	5-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
68:												
Nankin-----	0-2	7-14-20	1.45-1.55	14.00-42.00	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	5	2	134
	2-14	35-42-50	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	14-24	25-30-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	24-67	25-32-35	1.30-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.2-0.8	.24	.24			
	67-80	20-25-35	1.60-1.70	4.00-14.00	0.10-0.15	0.0-2.9	0.1-0.5	.24	.24			
Cowarts-----	0-3	3- 8-10	1.30-1.70	14.11-42.35	0.06-0.10	0.0-2.9	0.5-2.0	.17	.17	5	2	134
	3-18	20-26-35	1.30-1.50	1.41-14.11	0.10-0.16	0.0-2.9	0.0-0.5	.28	.28			
	18-80	18-28-35	1.45-1.75	0.42-4.23	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24			
Lakeland-----	0-2	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	2-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
71:												
Lynchburg-----	0-10	2- 6-10	1.40-1.70	42.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	10-16	5- 6-15	1.30-1.60	14.00-42.00	0.09-0.13	0.0-2.9	0.5-1.5	.10	.10			
	16-19	18-22-35	1.30-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20			
	19-60	18-31-35	1.30-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20			
	60-80	27-36-50	1.30-1.45	1.40-4.00	0.12-0.18	0.0-2.9	0.0-0.5	.20	.20			
72:												
Lynchburg-----	0-5	2- 6-10	1.40-1.70	42.00-141.00	0.07-0.10	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	5-10	5- 6-15	1.30-1.60	14.00-42.00	0.09-0.13	0.0-2.9	0.5-1.5	.10	.10			
	10-25	18-26-35	1.30-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20			
	25-45	18-26-35	1.30-1.50	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20			
	45-80	27-43-50	1.30-1.45	1.40-4.00	0.12-0.18	0.0-2.9	0.0-0.5	.20	.20			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
85:												
Searcy-----	0-2	5-10-20	1.35-1.60	1.40-4.00	0.12-0.18	3.0-5.9	1.0-4.0	.24	.24	5	6	48
	2-5	20-32-35	1.35-1.60	1.40-4.00	0.12-0.18	3.0-5.9	0.2-0.3	.24	.24			
	5-50	25-42-45	1.35-1.60	1.40-4.00	0.12-0.18	3.0-5.9	0.2-0.3	.24	.24			
	50-80	45-52-60	1.40-1.65	0.42-1.40	0.12-0.20	6.0-8.9	0.1-0.2	.28	.28			
Oktibbeha-----	0-4	27-42-50	1.20-1.50	0.01-0.42	0.13-0.17	3.0-5.9	3.0-6.0	.32	.32	5	6	48
	4-12	60-70-80	1.00-1.30	0.01-0.42	0.12-0.16	6.0-8.9	0.5-2.0	.32	.32			
	12-30	50-60-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.2-0.5	.32	.32			
	30-45	50-59-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.1-0.2	.32	.32			
	45-80	50-50-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.1-0.2	.32	.32			
86:												
Hannon-----	0-5	27-33-40	1.10-1.30	0.01-0.42	0.12-0.16	6.0-8.9	1.0-4.0	.32	.32	5	4	86
	5-10	40-59-60	1.10-1.30	0.01-0.42	0.05-0.10	9.0-25.0	0.5-2.0	.32	.32			
	10-25	50-62-75	1.10-1.30	0.01-0.42	0.05-0.10	9.0-25.0	0.1-1.0	.32	.32			
	25-80	27-36-40	1.10-1.40	0.01-0.42	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32			
Oktibbeha-----	0-2	27-42-50	1.20-1.50	0.01-0.42	0.13-0.17	3.0-5.9	3.0-6.0	.32	.32	5	6	48
	2-15	60-70-80	1.00-1.30	0.01-0.42	0.12-0.16	6.0-8.9	0.5-2.0	.32	.32			
	15-39	50-60-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.2-0.5	.32	.32			
	39-55	50-59-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.1-0.2	.32	.32			
	55-80	50-50-70	1.10-1.40	0.01-0.42	0.05-0.10	6.0-8.9	0.1-0.2	.32	.32			
87:												
Clara-----	0-6	1- 2- 3	1.40-1.55	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10	5	8	0
	6-20	1- 2- 3	1.40-1.55	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
	20-60	1- 3- 6	1.40-1.65	42.00-141.00	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
	60-80	1- 5-12	1.50-1.70	42.00-141.00	0.05-0.15	0.0-2.9	0.0-0.5	.10	.10			
Plummer-----	0-3	1- 4- 7	1.35-1.65	42.00-141.00	0.03-0.08	0.0-2.9	1.0-10	.10	.10	5	8	0
	3-47	1- 3- 7	1.35-1.65	14.00-141.00	0.03-0.10	0.0-2.9	0.1-0.5	.10	.10			
	47-59	15-18-30	1.50-1.70	1.40-14.00	0.07-0.15	0.0-2.9	0.0-0.5	.15	.15			
	59-80	15-22-30	1.50-1.70	1.40-14.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.20			
90:												
Rains-----	0-5	2- 5-15	1.30-1.60	14.00-42.00	0.08-0.12	0.0-2.9	1.0-6.0	.15	.15	5	2	134
	5-15	7-13-18	1.30-1.60	14.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.20	.20			
	15-55	18-26-35	1.30-1.60	4.00-14.00	0.11-0.15	0.0-2.9	0.5-1.0	.24	.24			
	55-80	18-23-35	1.30-1.50	4.00-14.00	0.10-0.15	0.0-2.9	0.5-1.0	.24	.24			
Bayboro-----	0-14	7-27-27	1.45-1.65	4.00-14.00	0.11-0.15	0.0-2.9	4.0-10	.17	.17	5	6	48
	14-30	27-39-40	1.20-1.40	0.42-1.40	0.14-0.18	3.0-5.9	0.2-1.0	.32	.32			
	30-80	40-42-60	1.20-1.40	0.42-1.40	0.14-0.18	3.0-5.9	0.1-0.5	.32	.32			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
91: Orangeburg-----	0-5	4- 6-10	1.35-1.55	14.00-42.00	0.06-0.11	0.0-2.9	0.5-1.0	.15	.15	5	2	134
	5-10	7-16-20	1.35-1.55	14.00-42.00	0.06-0.11	0.0-2.9	0.2-0.5	.15	.15			
	10-75	20-28-35	1.50-1.70	4.00-14.00	0.10-0.13	0.0-2.9	0.2-0.5	.24	.24			
	75-80	35-36-55	1.50-1.70	4.00-14.00	0.10-0.13	0.0-2.9	0.2-0.5	.24	.24			
96: Orangeburg-----	0-3	4- 6-10	1.35-1.55	14.00-42.00	0.06-0.11	0.0-2.9	0.5-1.0	.15	.15	5	2	134
	3-80	20-28-35	1.50-1.70	4.00-14.00	0.10-0.13	0.0-2.9	0.2-0.5	.24	.24			
98: Rutlege-----	0-15	3- 4-10	1.30-1.70	14.11-42.35	0.06-0.10	0.0-2.9	3.0-9.0	.17	.17	5	8	0
	15-80	1- 1-10	1.50-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.2-2.0	.17	.17			
99: Water.												
100: Leon-----	0-4	1- 3- 5	1.30-1.45	42.00-141.00	0.05-0.15	0.0-2.9	0.5-4.0	.10	.10	5	1	180
	4-10	0- 2- 3	1.40-1.60	42.00-141.00	0.02-0.05	0.0-2.9	0.0-0.5	.10	.10			
	10-30	2- 4- 8	1.25-1.65	4.00-42.00	0.15-0.30	0.0-2.9	2.0-4.0	.15	.15			
	30-35	1- 2- 6	1.40-1.65	14.00-141.00	0.02-0.05	0.0-2.9	0.1-1.0	.10	.10			
	35-51	2- 4- 8	1.50-1.70	4.00-42.00	0.05-0.10	0.0-2.9	2.0-4.0	.15	.15			
	51-80	1- 2- 4	1.50-1.65	14.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
Chipley-----	0-12	1- 3- 5	1.35-1.45	42.00-141.00	0.05-0.10	0.0-2.9	2.0-5.0	.10	.10	5	1	180
	12-53	1- 3- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			
	53-80	0- 1- 7	1.45-1.60	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.10	.10			
106: Pantego-----	0-18	5-12-15	1.40-1.60	14.00-42.00	0.12-0.20	0.0-2.9	4.0-7.0	.15	.15	5	8	0
	18-80	18-26-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.2-2.0	.20	.20			
Clara-----	0-6	1- 2- 3	1.40-1.55	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10	5	8	0
	6-20	1- 2- 3	1.40-1.55	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.10	.10			
	20-60	1- 3- 6	1.40-1.65	42.00-141.00	0.10-0.15	0.0-2.9	0.0-0.5	.10	.10			
	60-80	1- 5-12	1.50-1.70	42.00-141.00	0.05-0.15	0.0-2.9	0.0-0.5	.10	.10			
110: Arents-----	0-80	1- 3- 5	1.30-1.70	141.00- 353.00	0.02-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	180
112: Pottsburg-----	0-12	1- 2- 4	1.20-1.45	42.00-141.00	0.05-0.15	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	12-60	0- 1- 4	1.40-1.70	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.10	.10			
	60-80	1- 3- 6	1.55-1.70	4.00-14.00	0.10-0.25	0.0-2.9	1.0-4.0	.15	.15			

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Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
113: Pits.												
Udorthents-----	0-80	10-14-20	1.30-1.65	0.01-14.00	0.10-0.17	3.0-5.9	0.0-1.0	.28	.28	5	3	86
116: Blanton-----	0-6	1- 4- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	6-56	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	56-61	7-15-18	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	61-80	7-19-20	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Lakeland-----	0-7	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	7-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
117: Blanton-----	0-5	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	2	134
	5-50	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	50-63	10-10-18	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	63-80	12-26-40	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Lakeland-----	0-6	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	6-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
119: Blanton-----	0-4	1- 2- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	4-46	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	46-52	10-19-20	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	52-80	20-26-35	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Lakeland-----	0-4	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	4-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
121: Goldsboro-----	0-9	2- 6- 8	1.55-1.75	42.00-141.00	0.06-0.11	0.0-2.9	1.0-3.0	.15	.15	5	2	134
	9-16	2- 8-10	1.55-1.75	14.00-42.00	0.06-0.11	0.0-2.9	0.1-0.5	.17	.17			
	16-35	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			
	35-80	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			
122: Goldsboro-----	0-7	2- 6- 8	1.55-1.75	42.00-141.00	0.06-0.11	0.0-2.9	1.0-3.0	.15	.15	5	2	134
	7-12	2- 8-10	1.55-1.75	14.00-42.00	0.06-0.11	0.0-2.9	0.1-0.5	.17	.17			
	12-40	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			
	40-80	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			

Table 16.--Physical Soil Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	µm/sec	In/in	Pct	Pct					
123: Blanton-----	0-3	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	3-43	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	43-52	10-10-18	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	52-80	12-26-40	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Lakeland-----	0-3	1- 2- 8	1.35-1.65	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.10	5	1	180
	3-80	1- 2- 6	1.50-1.60	42.00-141.00	0.02-0.08	0.0-2.9	0.0-0.5	.10	.10			
127: Goldsboro-----	0-5	2- 6- 8	1.55-1.75	42.00-141.00	0.06-0.11	0.0-2.9	1.0-3.0	.15	.15	5	2	134
	5-7	2- 8-10	1.55-1.75	14.00-42.00	0.06-0.11	0.0-2.9	0.1-0.5	.17	.17			
	7-49	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			
	49-80	18-24-34	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	0.0-0.2	.24	.24			
128: Blanton-----	0-6	1- 4- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	6-46	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	46-54	8-19-20	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	54-80	7-15-18	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Bonneau-----	0-6	2- 5- 8	1.30-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	6-25	2- 4- 8	1.30-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.10			
	25-48	15-18-30	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
	48-80	18-24-35	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
129: Blanton-----	0-5	1- 4- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	5-50	1- 3- 7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.1-0.5	.10	.10			
	50-52	8-10-18	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15			
	52-80	7-15-20	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
Bonneau-----	0-3	2- 5- 8	1.30-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.5-2.0	.10	.10	5	1	180
	3-15	2- 4- 8	1.30-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.10			
	15-54	15-18-30	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			
	54-80	18-24-35	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20			

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Table 17.--Chemical Soil Properties

[Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	Inches	meq/100 g	meq/100 g	pH	Pct
2:					
Rutlege-----	0-10	---	0.7-5.4	3.5-5.0	0
	10-80	---	0.3-4.5	3.5-5.0	0
Pickney-----	0-20	---	1.1-8.4	3.5-5.5	0
	20-80	---	0.7-7.7	3.5-6.0	0
Pamlico-----	0-40	---	8.7-57	3.5-5.5	0
	40-80	---	0.7-7.1	3.5-5.5	0
4:					
Gritney-----	0-9	---	0.5-2.9	3.5-6.0	0
	9-35	---	6.9-13	3.5-5.5	0
	35-45	---	6.9-13	3.5-5.5	0
	45-80	---	2.0-8.4	3.5-5.5	0
7:					
Bladen-----	0-5	---	1.6-3.7	3.5-5.5	0
	5-30	---	6.9-12	3.5-5.5	0
	30-54	---	6.9-12	3.5-5.5	0
	54-80	---	6.9-12	3.5-5.5	0
Dunbar-----	0-10	---	0.1-3.8	4.5-5.5	0
	10-20	---	0.2-7.8	4.5-5.5	0
	20-35	---	0.3-10	4.5-5.5	0
	35-55	---	0.3-8.4	4.5-5.5	0
	55-65	---	0.3-10	4.5-5.5	0
	65-80	---	0.3-10	4.5-5.5	0
9:					
Albany-----	0-3	---	0.1-2.5	3.5-6.5	0
	3-50	---	0.0-3.8	3.5-6.5	0
	50-55	---	0.0-3.8	3.5-6.5	0
	55-80	---	0.2-2.7	4.5-6.0	0
Chipley-----	0-8	---	0.8-4.0	3.5-6.0	0
	8-50	0.8-5.4	---	4.5-6.5	0
	50-80	0.4-5.4	---	4.5-6.5	0
Leon-----	0-4	---	0.2-3.5	3.5-6.5	0
	4-10	---	0.0-1.9	3.5-6.5	0
	10-30	---	0.5-4.5	3.5-6.5	0
	30-35	---	0.0-4.0	3.5-6.5	0
	35-51	---	0.5-4.5	3.5-6.5	0
	51-80	---	0.1-1.6	3.5-6.5	0
11:					
Dothan-----	0-8	---	0.1-3.8	4.5-6.0	0
	8-10	---	0.2-7.4	4.5-6.0	0
	10-35	---	0.2-6.1	4.5-6.0	0
	35-80	---	0.2-6.1	4.5-6.0	0
12:					
Dothan-----	0-7	---	0.1-3.8	4.5-6.0	0
	7-39	---	0.1-6.1	4.5-6.0	0
	39-80	---	0.2-5.9	4.5-6.0	0

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Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
14: Dothan-----	0-6	---	0.1-3.8	4.5-6.0	0
	6-33	---	0.1-6.1	4.5-6.0	0
	33-80	---	0.2-5.9	4.5-6.0	0
18: Fuquay-----	0-4	---	0.1-3.1	4.5-6.0	0
	4-12	---	0.1-6.2	4.5-6.0	0
	12-20	---	0.1-5.5	4.5-6.0	0
	20-80	---	0.1-5.9	4.5-6.0	0
Dothan-----	0-6	---	0.1-3.8	4.5-6.0	0
	6-30	---	0.1-6.1	4.5-6.0	0
	30-80	---	0.2-5.9	4.5-6.0	0
22: Nankin-----	0-5	---	0.1-5.7	4.5-5.5	0
	5-20	---	0.3-7.5	4.5-5.5	0
	20-56	---	0.3-6.1	4.5-5.5	0
	56-68	---	0.3-5.9	4.5-5.5	0
	68-80	---	0.2-5.9	4.5-5.5	0
Cowarts-----	0-5	---	0.1-3.0	4.5-5.5	0
	5-12	---	0.2-5.7	4.5-5.5	0
	12-25	---	0.2-5.9	4.5-5.5	0
	25-80	---	0.2-7.8	4.5-5.5	0
23: Nankin-----	0-4	---	1.0-4.9	4.5-5.5	0
	4-18	---	0.3-7.5	4.5-5.5	0
	18-56	---	0.3-6.1	4.5-5.5	0
	56-68	---	0.3-5.9	4.5-5.5	0
	68-80	---	0.2-5.9	4.5-5.5	0
Cowarts-----	0-4	---	0.1-3.0	4.5-5.5	0
	4-7	---	0.2-7.1	4.5-5.5	0
	7-33	---	0.2-5.9	4.5-5.5	0
	33-80	---	0.2-7.8	4.5-5.5	0
29: Dunbar-----	0-10	---	0.1-3.8	4.5-5.5	0
	10-20	---	0.2-7.8	4.5-5.5	0
	20-35	---	0.3-10	4.5-5.5	0
	35-55	---	0.3-8.4	4.5-5.5	0
	55-65	---	0.3-10	4.5-5.5	0
	65-80	---	0.3-10	4.5-5.5	0
35: Lucy-----	0-6	---	0.0-2.2	4.5-6.0	0
	6-25	---	0.1-7.3	5.1-6.0	0
	25-31	---	0.2-5.6	4.5-5.5	0
	31-80	---	0.2-5.9	4.5-5.5	0
Troup-----	0-11	---	0.0-2.2	4.5-6.0	0
	11-71	---	0.0-4.2	4.5-6.0	0
	71-80	---	0.2-7.8	4.5-5.5	0
36: Troup-----	0-10	---	0.0-2.2	4.5-6.0	0
	10-55	---	0.0-4.2	4.5-6.0	0
	55-80	---	0.2-7.8	4.5-5.5	0

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Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
36: Lucy-----	0-4	---	0.0-2.2	4.5-6.0	0
	4-17	---	0.1-7.3	5.1-6.0	0
	17-26	---	0.2-5.6	4.5-5.5	0
	26-80	---	0.2-5.9	4.5-5.5	0
39: Bonifay-----	0-5	---	0.1-1.3	4.5-6.5	0
	5-32	---	0.2-4.8	4.5-6.5	0
	32-50	---	0.2-4.8	4.5-6.5	0
	50-80	---	0.5-4.1	4.5-6.5	0
Fuquay-----	0-7	---	0.1-2.2	4.5-6.0	0
	7-31	---	0.1-5.5	4.5-6.0	0
	31-36	---	0.1-5.5	4.5-6.0	0
	36-50	---	0.1-7.8	4.5-6.0	0
	50-80	---	0.1-5.9	4.5-6.0	0
40: Bonifay-----	0-3	---	0.1-1.3	4.5-6.5	0
	3-28	---	0.2-4.8	4.5-6.5	0
	28-43	---	0.2-4.8	4.5-6.5	0
	43-80	---	0.5-4.1	4.5-6.5	0
41: Lucy-----	0-10	---	0.0-2.2	4.5-6.0	0
	10-28	---	0.1-7.3	5.1-6.0	0
	28-35	---	0.2-5.6	4.5-5.5	0
	35-80	---	0.2-5.9	4.5-5.5	0
52: Grady-----	0-8	---	1.9-9.2	3.5-5.5	0
	8-16	---	0.2-7.9	3.5-5.5	0
	16-45	---	0.4-13	3.5-5.5	0
	45-80	---	0.3-12	3.5-5.5	0
54: Albany-----	0-3	---	0.1-2.5	3.5-6.5	0
	3-53	---	0.0-3.8	3.5-6.5	0
	53-80	---	0.2-2.7	4.5-6.0	0
Ocilla-----	0-5	---	0.3-1.2	4.5-5.5	0
	5-25	---	0.1-4.6	4.5-5.5	0
	25-60	---	2.9-7.6	4.5-5.5	0
	60-80	---	2.9-7.6	4.5-5.5	0
55: Chipley-----	0-10	---	0.8-4.0	3.5-6.0	0
	10-49	---	0.1-2.2	4.5-6.5	0
	49-80	---	0.1-2.2	4.5-6.5	0
Albany-----	0-2	---	0.1-2.5	3.5-6.5	0
	2-51	---	0.0-3.8	3.5-6.5	0
	51-53	---	0.0-3.8	3.5-6.5	0
	53-80	---	0.2-2.7	4.5-6.0	0
Hurricane-----	0-6	---	0.2-2.5	3.5-6.0	0
	6-35	---	0.0-2.2	3.5-6.0	0
	35-55	---	0.0-2.2	3.5-6.0	0
	55-80	---	0.3-4.1	3.5-6.0	0

Soil Survey of Washington County, Florida

Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
56:					
Albany-----	0-2	---	0.1-2.5	3.5-6.5	0
	2-47	---	0.0-3.8	3.5-6.5	0
	47-80	---	0.2-2.7	4.5-6.0	0
Ocilla-----	0-3	---	0.3-1.2	4.5-5.5	0
	3-14	---	0.1-4.6	4.5-5.5	0
	14-35	---	2.9-7.6	4.5-5.5	0
	35-80	---	2.9-7.6	4.5-5.5	0
57:					
Ocilla-----	0-5	---	0.3-1.2	4.5-5.5	0
	5-39	---	0.1-4.6	4.5-5.5	0
	39-62	---	2.9-7.6	4.5-5.5	0
	62-80	---	2.9-7.6	4.5-5.5	0
Leefield-----	0-5	---	0.1-1.6	4.5-6.0	0
	5-30	---	0.3-7.1	4.5-6.0	0
	30-33	---	0.5-3.6	4.5-5.5	0
	33-80	---	0.5-3.7	4.5-5.5	0
61:					
Lakeland-----	0-4	---	0.4-3.2	4.5-6.0	0
	4-80	---	0.1-1.9	4.5-6.0	0
62:					
Lakeland-----	0-2	---	0.4-3.2	4.5-6.0	0
	2-80	---	0.1-1.9	4.5-6.0	0
63:					
Lakeland-----	0-7	---	0.4-3.2	4.5-6.0	0
	7-80	---	0.1-1.9	4.5-6.0	0
64:					
Lakeland-----	0-6	---	0.4-3.2	4.5-6.0	0
	6-80	---	0.1-1.9	4.5-6.0	0
67:					
Nankin-----	0-3	---	0.1-5.7	4.5-5.5	0
	3-16	---	0.3-7.5	4.5-5.5	0
	16-56	---	0.3-6.1	4.5-5.5	0
	56-71	---	0.3-5.9	4.5-5.5	0
	71-80	---	0.2-5.9	4.5-5.5	0
Cowarts-----	0-4	---	0.1-3.0	4.5-5.5	0
	4-30	---	0.2-5.9	4.5-5.5	0
	30-80	---	0.2-7.8	4.5-5.5	0
Lakeland-----	0-5	---	0.4-3.2	4.5-6.0	0
	5-80	---	0.1-1.9	4.5-6.0	0
68:					
Nankin-----	0-2	---	0.1-5.7	4.5-5.5	0
	2-14	---	0.3-7.5	4.5-5.5	0
	14-24	---	0.3-6.1	4.5-5.5	0
	24-67	---	0.3-5.9	4.5-5.5	0
	67-80	---	0.2-5.9	4.5-5.5	0
Cowarts-----	0-3	---	0.1-3.0	4.5-5.5	0
	3-18	---	0.2-5.9	4.5-5.5	0
	18-80	---	0.2-7.8	4.5-5.5	0

Soil Survey of Washington County, Florida

Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
68: Lakeland-----	0-2	---	0.4-3.2	4.5-6.0	0
	2-80	---	0.1-1.9	4.5-6.0	0
71: Lynchburg-----	0-10	---	0.3-1.9	3.5-6.0	0
	10-16	---	0.2-1.3	3.5-5.5	0
	16-19	---	3.5-8.4	3.5-5.5	0
	19-60	---	3.5-8.4	3.5-5.5	0
	60-80	---	5.3-12	3.5-5.5	0
72: Lynchburg-----	0-5	---	0.3-1.9	3.5-6.0	0
	5-10	---	0.2-1.3	3.5-5.5	0
	10-25	---	3.5-8.4	3.5-5.5	0
	25-45	---	3.5-8.4	3.5-5.5	0
	45-80	---	5.3-12	3.5-5.5	0
85: Searcy-----	0-2	---	1.0-5.9	3.6-6.0	0
	2-5	---	8.8-19	3.6-6.0	0
	5-50	---	8.8-19	3.6-6.0	0
	50-80	---	18-30	3.6-6.0	0
Oktibbeha-----	0-4	22-39	---	4.5-6.8	0
	4-12	42-56	---	4.5-6.8	0
	12-30	35-48	---	6.3-7.5	0
	30-45	33-46	---	6.6-8.4	29-52
	45-80	33-46	---	6.6-8.4	29-52
86: Hannon-----	0-5	21-31	---	5.1-7.3	0
	5-10	29-44	---	5.1-7.3	0
	10-25	34-52	---	5.6-7.8	0-5
	25-80	19-29	---	7.4-8.4	15-40
Oktibbeha-----	0-2	22-39	---	4.5-6.8	0
	2-15	42-56	---	4.5-6.8	0
	15-39	35-48	---	6.3-7.5	0
	39-55	33-46	---	6.6-8.4	29-52
	55-80	33-46	---	6.6-8.4	29-52
87: Clara-----	0-6	---	0.1-1.1	3.5-6.0	0
	6-20	---	0.0-1.8	3.5-6.0	0
	20-60	---	0.1-1.9	3.5-6.0	0
	60-80	---	0.1-3.4	3.5-6.0	0
Plummer-----	0-3	---	0.1-1.4	3.5-5.5	0
	3-47	---	0.0-3.0	3.5-5.5	0
	47-59	---	0.5-4.7	3.5-5.5	0
	59-80	---	0.5-4.7	3.5-5.5	0
90: Rains-----	0-5	---	0.3-2.7	4.5-6.5	0
	5-15	---	0.4-1.8	4.5-6.5	0
	15-55	---	3.3-6.9	3.5-5.5	0
	55-80	---	3.3-6.9	3.5-5.5	0

Soil Survey of Washington County, Florida

Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
90: Bayboro-----	0-14	---	1.1-4.7	3.5-5.5	0
	14-30	---	5.1-8.3	4.5-5.5	0
	30-80	---	8.0-13	4.5-5.5	0
91: Orangeburg-----	0-5	---	0.1-3.1	4.5-6.3	0
	5-10	---	0.1-5.8	4.5-5.5	0
	10-75	---	0.2-5.9	4.5-5.5	0
	75-80	---	0.3-6.5	4.5-5.5	0
96: Orangeburg-----	0-3	---	0.1-3.1	4.5-6.3	0
	3-80	---	0.2-5.9	4.5-5.5	0
98: Rutlege-----	0-15	---	1.3-8.2	3.5-5.5	0
	15-80	---	0.3-4.5	3.5-5.0	0
99: Water.					
100: Leon-----	0-4	---	0.2-3.5	3.5-6.5	0
	4-10	---	0.0-1.9	3.5-6.5	0
	10-30	---	0.5-4.5	3.5-6.5	0
	30-35	---	0.0-4.0	3.5-6.5	0
	35-51	---	0.5-4.5	3.5-6.5	0
	51-80	---	0.1-1.6	3.5-6.5	0
Chipley-----	0-12	---	0.8-4.0	3.5-6.0	0
	12-53	---	0.1-2.2	4.5-6.5	0
	53-80	---	0.1-2.2	4.5-6.5	0
106: Pantego-----	0-18	---	0.8-2.5	3.5-5.5	0
	18-80	---	3.2-7.4	3.5-5.5	0
Clara-----	0-6	---	0.1-1.1	3.5-6.0	0
	6-20	---	0.0-1.8	3.5-6.0	0
	20-60	---	0.1-1.9	3.5-6.0	0
	60-80	---	0.1-3.4	3.5-6.0	0
110: Arents-----	0-80	---	0.4-2.1	3.5-6.5	0
112: Pottsburg-----	0-12	---	0.2-2.8	3.5-6.5	0
	12-60	---	0.0-2.3	3.5-6.5	0
	60-80	---	0.3-3.8	3.5-6.0	0
113: Pits.					
Udorthents-----	0-80	5.7-14	---	4.5-7.8	0
116: Blanton-----	0-6	---	0.2-1.3	4.5-6.0	0
	6-56	---	0.0-3.2	4.5-6.0	0
	56-61	---	1.3-4.2	4.5-6.0	0
	61-80	---	1.3-4.7	4.5-6.0	0

Soil Survey of Washington County, Florida

Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
116: Lakeland-----	0-7	---	0.4-3.2	4.5-6.0	0
	7-80	---	0.1-1.9	4.5-6.0	0
117: Blanton-----	0-5	---	0.2-1.3	4.5-6.0	0
	5-50	---	0.0-3.2	4.5-6.0	0
	50-63	---	1.9-4.2	4.5-6.0	0
	63-80	---	2.3-9.7	4.5-6.0	0
Lakeland-----	0-6	---	0.4-3.2	4.5-6.0	0
	6-80	---	0.1-1.9	4.5-6.0	0
119: Blanton-----	0-4	---	0.2-1.3	4.5-6.0	0
	4-46	---	0.0-3.2	4.5-6.0	0
	46-52	---	1.9-4.7	4.5-6.0	0
	52-80	---	3.9-8.4	4.5-6.0	0
Lakeland-----	0-4	---	0.4-3.2	4.5-6.0	0
	4-80	---	0.1-1.9	4.5-6.0	0
121: Goldsboro-----	0-9	---	0.1-1.8	3.5-5.5	0
	9-16	---	0.1-5.2	3.5-5.5	0
	16-35	---	0.6-5.2	3.5-5.5	0
	35-80	---	0.6-5.2	3.5-5.5	0
122: Goldsboro-----	0-7	---	0.1-1.8	3.5-5.5	0
	7-12	---	0.1-5.2	3.5-5.5	0
	12-40	---	0.6-5.2	3.5-5.5	0
	40-80	---	0.6-5.2	3.5-5.5	0
123: Blanton-----	0-3	---	0.2-1.3	4.5-6.0	0
	3-43	---	0.0-3.2	4.5-6.0	0
	43-52	---	1.9-4.2	4.5-6.0	0
	52-80	---	2.3-9.7	4.5-6.0	0
Lakeland-----	0-3	---	0.4-3.2	4.5-6.0	0
	3-80	---	0.1-1.9	4.5-6.0	0
127: Goldsboro-----	0-5	---	0.1-1.8	3.5-5.5	0
	5-7	---	0.1-5.2	3.5-5.5	0
	7-49	---	0.6-5.2	3.5-5.5	0
	49-80	---	0.6-5.2	3.5-5.5	0
128: Blanton-----	0-6	---	0.2-1.3	4.5-6.0	0
	6-46	---	0.0-3.2	4.5-6.0	0
	46-54	---	1.5-4.7	4.5-6.0	0
	54-80	---	1.3-4.2	4.5-6.0	0
Bonneau-----	0-6	---	0.1-1.2	4.5-5.5	0
	6-25	---	0.0-3.4	4.5-5.5	0
	25-48	---	0.5-3.7	4.5-5.5	0
	48-80	---	0.6-4.1	4.5-5.5	0

Soil Survey of Washington County, Florida

Table 17.--Chemical Soil Properties--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>
129: Blanton-----	0-5	---	0.2-1.3	4.5-6.0	0
	5-50	---	0.0-3.2	4.5-6.0	0
	50-52	---	1.5-4.2	4.5-6.0	0
	52-80	---	1.3-4.7	4.5-6.0	0
Bonneau-----	0-3	---	0.1-1.2	4.5-5.5	0
	3-15	---	0.0-3.4	4.5-5.5	0
	15-54	---	0.5-4.2	4.5-5.5	0
	54-80	---	0.6-4.7	4.5-5.5	0

Soil Survey of Washington County, Florida

Table 18.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
2:		In	In		In	In		
Rutlege-----	---	---	---	---	---	---	High	High
Pickney-----	---	---	---	---	---	---	High	High
Pamlico-----	---	---	---	---	4-12	10-29	High	High
4:								
Gritney-----	---	---	---	---	---	---	High	High
7:								
Bladen-----	---	---	---	---	---	---	High	High
Dunbar-----	---	---	---	---	---	---	High	High
9:								
Albany-----	---	---	---	---	---	---	High	High
Chipley-----	---	---	---	---	---	---	Low	High
Leon-----	---	---	---	---	---	---	High	High
11:								
Dothan-----	---	---	---	---	---	---	Moderate	Moderate
12:								
Dothan-----	---	---	---	---	---	---	Moderate	Moderate
14:								
Dothan-----	---	---	---	---	---	---	Moderate	Moderate
18:								
Fuquay-----	---	---	---	---	---	---	Low	High
Dothan-----	---	---	---	---	---	---	Moderate	Moderate
22:								
Nankin-----	---	---	---	---	---	---	High	High
Cowarts-----	---	---	---	---	---	---	Moderate	Moderate
23:								
Nankin-----	---	---	---	---	---	---	High	High
Cowarts-----	---	---	---	---	---	---	Moderate	Moderate
29:								
Dunbar-----	---	---	---	---	---	---	High	High
35:								
Lucy-----	---	---	---	---	---	---	Low	High
Troup-----	---	---	---	---	---	---	Low	Moderate
36:								
Troup-----	---	---	---	---	---	---	Low	Moderate
Lucy-----	---	---	---	---	---	---	Low	High

Soil Survey of Washington County, Florida

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	In		In	In		
39: Bonifay-----	---	---	---	---	---	---	Low	High
Fuquay-----	---	---	---	---	---	---	Low	High
40: Bonifay-----	---	---	---	---	---	---	Low	High
41: Lucy-----	---	---	---	---	---	---	Low	High
52: Grady-----	---	---	---	---	---	---	High	High
54: Albany-----	---	---	---	---	---	---	High	High
Ocilla-----	---	---	---	---	---	---	High	Moderate
55: Chipley-----	---	---	---	---	---	---	Low	High
Albany-----	---	---	---	---	---	---	High	High
Hurricane-----	---	---	---	---	---	---	Low	Moderate
56: Albany-----	---	---	---	---	---	---	High	High
Ocilla-----	---	---	---	---	---	---	High	Moderate
57: Ocilla-----	---	---	---	---	---	---	High	Moderate
Leefield-----	---	---	---	---	---	---	Moderate	High
61: Lakeland-----	---	---	---	---	---	---	Low	Moderate
62: Lakeland-----	---	---	---	---	---	---	Low	Moderate
63: Lakeland-----	---	---	---	---	---	---	Low	Moderate
64: Lakeland-----	---	---	---	---	---	---	Low	Moderate
67: Nankin-----	---	---	---	---	---	---	High	High
Cowarts-----	---	---	---	---	---	---	Moderate	Moderate
Lakeland-----	---	---	---	---	---	---	Low	Moderate
68: Nankin-----	---	---	---	---	---	---	High	High
Cowarts-----	---	---	---	---	---	---	Moderate	Moderate
Lakeland-----	---	---	---	---	---	---	Low	Moderate

Soil Survey of Washington County, Florida

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
71: Lynchburg-----	---	In	In	---	In	In	High	High
72: Lynchburg-----	---	---	---	---	---	---	High	High
85: Searcy-----	---	---	---	---	---	---	High	High
Oktibbeha-----	---	---	---	---	---	---	High	High
86: Hannon-----	---	---	---	---	---	---	High	Low
Oktibbeha-----	---	---	---	---	---	---	High	High
87: Clara-----	---	---	---	---	---	---	High	Moderate
Plummer-----	---	---	---	---	---	---	Moderate	High
90: Rains-----	---	---	---	---	---	---	High	High
Bayboro-----	---	---	---	---	---	---	High	High
91: Orangeburg-----	---	---	---	---	---	---	Moderate	Moderate
96: Orangeburg-----	---	---	---	---	---	---	Moderate	Moderate
98: Rutlege-----	---	---	---	---	---	---	High	High
99: Water.								
100: Leon-----	---	---	---	---	---	---	High	High
Chipley-----	---	---	---	---	---	---	Low	High
106: Pantego-----	---	---	---	---	---	---	High	High
Clara-----	---	---	---	---	---	---	High	Moderate
110: Arents-----	---	---	---	---	---	---	High	Moderate
112: Pottsburg-----	---	---	---	---	---	---	High	High
113: Pits.								
Udorthents-----	---	---	---	---	---	---	Moderate	High
116: Blanton-----	---	---	---	---	---	---	High	High
Lakeland-----	---	---	---	---	---	---	Low	Moderate

Soil Survey of Washington County, Florida

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total	Uncoated steel	Concrete
		In	In		In	In		
117: Blanton-----	---	---	---	---	---	---	High	High
Lakeland-----	---	---	---	---	---	---	Low	Moderate
119: Blanton-----	---	---	---	---	---	---	High	High
Lakeland-----	---	---	---	---	---	---	Low	Moderate
121: Goldsboro-----	---	---	---	---	---	---	Moderate	High
122: Goldsboro-----	---	---	---	---	---	---	Moderate	High
123: Blanton-----	---	---	---	---	---	---	High	High
Lakeland-----	---	---	---	---	---	---	Low	Moderate
127: Goldsboro-----	---	---	---	---	---	---	Moderate	High
128: Blanton-----	---	---	---	---	---	---	High	High
Bonneau-----	---	---	---	---	---	---	Low	High
129: Blanton-----	---	---	---	---	---	---	High	High
Bonneau-----	---	---	---	---	---	---	Low	High

Soil Survey of Washington County, Florida

Table 19.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
2: Rutlege-----	A/D	Jan-Sep	0	>6.0	---	---	None	Long	Frequent
		Oct-Dec	---	---	---	---	None	Long	Frequent
Pickney-----	A/D	Jan-Sep	0	>6.0	---	---	None	Long	Frequent
		Oct-Dec	---	---	---	---	None	Long	Frequent
Pamlico-----	A/D	Jan-Sep	0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
		Oct-Dec	---	---	---	---	---	Long	Frequent
4: Gritney-----	C	Jan-Dec	---	---	---	---	None	---	None
7: Bladen-----	C/D	Jan-Mar	0.0-1.0	>6.0	---	---	None	Brief	Occasional
		Apr-May	0.0-1.0	>6.0	---	---	None	---	None
		Jun	---	---	---	---	None	---	None
		Jul-Sep	---	---	---	---	None	Brief	Occasional
		Oct-Nov	---	---	---	---	None	---	None
		Dec	0.0-1.0	>6.0	---	---	None	---	None
Dunbar-----	C/D	Jan-Mar	1.0-2.0	>6.0	---	---	None	Very brief	Occasional
		Apr-May	1.0-2.0	>6.0	---	---	None	---	None
		Jun	---	---	---	---	None	---	None
		Jul-Sep	---	---	---	---	None	Very brief	Occasional
		Oct	---	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	>6.0	---	---	None	---	None
9: Albany-----	A	Jan-Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.0-2.5	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
Chipley-----	A	Jan-Mar	1.5-3.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.5-3.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Leon-----	A/D	Jan-Mar	0.5-1.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	0.5-1.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
11: Dothan-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
12: Dothan-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
14: Dothan-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
18: Fuquay-----	B	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Dothan-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
22: Nankin-----	C	Jan-Dec	---	---	---	---	None	---	None
Cowarts-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
23: Nankin-----	C	Jan-Dec	---	---	---	---	None	---	None
Cowarts-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
29: Dunbar-----	C/D	Jan-Mar	1.0-2.0	>6.0	---	---	None	Very brief	Occasional
		Apr-May	1.0-2.0	>6.0	---	---	None	---	None
		Jun	---	---	---	---	None	---	None
		Jul-Sep	---	---	---	---	None	Very brief	Occasional
		Oct	---	---	---	---	None	---	None
		Nov-Dec	1.0-2.0	>6.0	---	---	None	---	None
35: Lucy-----	B	Jan-Dec	---	---	---	---	None	---	None
Troup-----	A	Jan-Dec	---	---	---	---	None	---	None
36: Troup-----	A	Jan-Dec	---	---	---	---	None	---	None
Lucy-----	B	Jan-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
39: Bonifay-----	A	Jan-Mar	4.5-5.5	5.0-6.0	---	---	None	---	None
		Apr-Jul	---	---	---	---	None	---	None
		Aug-Sep	4.5-5.5	5.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Fuquay-----	B	Jan-Mar	3.5-4.5	4.0-5.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-4.5	4.0-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
40: Bonifay-----	A	Jan-Mar	4.5-5.5	5.0-6.0	---	---	None	---	None
		Apr-Jul	---	---	---	---	None	---	None
		Aug-Sep	4.5-5.5	5.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
41: Lucy-----	B	Jan-Dec	---	---	---	---	None	---	None
52: Grady-----	C/D	Jan	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Feb-Apr	0	>6.0	0.0-2.0	Long	Frequent	---	None
		May-Jun	0.0-1.0	>6.0	---	---	None	---	None
		Jul-Sep	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	0.0-1.0	>6.0	---	---	None	---	None
54: Albany-----	A	Jan-Apr	1.0-2.5	>6.0	---	---	None	Brief	Occasional
		May-Jun	---	---	---	---	None	---	---
		Jul-Sep	1.0-2.5	>6.0	---	---	None	Brief	Occasional
		Oct-Nov	---	---	---	---	None	---	---
		Dec	1.0-2.5	>6.0	---	---	None	Brief	Occasional
Ocilla-----	B/D	Jan-Mar	1.0-2.5	>6.0	---	---	None	Very brief	Occasional
		Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.0-2.5	>6.0	---	---	None	Very brief	Occasional
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
55: Chipley-----	A	Jan-Mar	1.5-3.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.5-3.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Albany-----	A	Jan-Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.0-2.5	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
Hurricane----	A	Jan-Mar	1.5-3.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.5-3.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
56:									
Albany-----	A	Jan-Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.0-2.5	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
Ocilla-----	B/D	Jan-Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Aug	---	---	---	---	None	---	None
		Sep	1.0-2.5	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
57:									
Ocilla-----	B/D	Jan-Apr	1.0-2.5	>6.0	---	---	None	---	None
		May-Aug	---	---	---	---	None	---	None
		Sep	1.0-2.5	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	1.0-2.5	>6.0	---	---	None	---	None
Leefield-----	A	Jan-Mar	1.5-2.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.5-2.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
61:									
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
62:									
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
63:									
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
64:									
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
67:									
Nankin-----	C	Jan-Dec	---	---	---	---	None	---	None
Cowarts-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
68:									
Nankin-----	C	Jan-Dec	---	---	---	---	None	---	None
Cowarts-----	C	Jan-Apr	3.0-4.5	3.5-5.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.0-4.5	3.5-5.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
71: Lynchburg----	B/D	Jan-Mar	0.5-1.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	0.5-1.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
72: Lynchburg----	B/D	Jan-Mar	0.5-1.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	0.5-1.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
85: Searcy-----	C	Jan-Apr	1.5-3.0	3.5-4.0	---	---	None	---	None
		May-Dec	---	---	---	---	None	---	None
Oktibbeha----	D	Jan-Dec	---	---	---	---	None	---	None
86: Hannon-----	D	Jan-Dec	---	---	---	---	None	---	None
Oktibbeha----	D	Jan-Dec	---	---	---	---	None	---	None
87: Clara-----	A/D	Jan-Apr	0	>6.0	0.0-0.5	Long	Occasional	---	None
		May-Jun	0.0-0.5	>6.0	---	---	---	---	None
		Jul-Sep	0	>6.0	0.0-0.5	Long	Occasional	---	None
		Oct-Nov	0.0-0.5	>6.0	---	---	---	---	None
		Dec	0	>6.0	0.0-0.5	Long	Occasional	---	None
Plummer-----	A/D	Jan-Apr	0	>6.0	0.0-0.5	Long	Occasional	---	None
		May-Jun	0.0-0.5	>6.0	---	---	---	---	None
		Jul-Sep	0	>6.0	0.0-0.5	Long	Occasional	---	None
		Oct-Nov	0.0-0.5	>6.0	---	---	---	---	None
		Dec	---	---	0.0-0.5	Long	Occasional	---	None
90: Rains-----	B/D	Jan-Mar	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Apr-May	---	---	---	---	None	---	None
		Jun	0.0-1.0	>6.0	---	---	None	---	None
		Jul-Sep	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Oct-Dec	---	---	---	---	None	---	None
Bayboro-----	C/D	Jan-Mar	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Apr-May	---	---	---	---	None	---	None
		Jun	0.0-1.0	>6.0	---	---	None	---	None
		Jul-Sep	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	---	None
		Oct-Dec	---	---	---	---	None	---	None
91: Orangeburg---	B	Jan-Dec	---	---	---	---	None	---	None
96: Orangeburg---	B	Jan-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
98: Rutlege-----	A/D	Jan-Mar	0	>6.0	0.0-2.0	Very long	Frequent	Long	Frequent
		Apr-Jun	0	>6.0	0.0-2.0	Very long	Frequent	Long	Occasional
		Jul-Sep	0	>6.0	0.0-2.0	Very long	Frequent	Long	Frequent
		Oct-Dec	0	>6.0	---	---	---	Brief	Occasional
100: Leon-----	A/D	Jan-Mar	0.5-1.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	0.5-1.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Chipley-----	A	Jan-Mar	1.5-3.5	>6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	1.5-3.5	>6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
106: Pantego-----	B/D	Jan-Dec	0	>6.0	0.0-2.0	Long	Frequent	---	None
Clara-----	A/D	Jan-Apr	0	>6.0	0.0-0.5	Long	Occasional	---	None
		May-Jun	0.0-0.5	>6.0	---	---	---	---	None
		Jul-Sep	0	>6.0	0.0-0.5	Long	Occasional	---	None
		Oct-Nov	0.0-0.5	>6.0	---	---	---	---	None
		Dec	0	>6.0	0.0-0.5	Long	Occasional	---	None
110: Arents-----	A	Jan-Apr	1.5-3.0	>6.0	---	---	None	---	None
		May-Nov	---	---	---	---	None	---	None
		Dec	1.5-3.0	>6.0	---	---	None	---	None
112: Pottsburg----	A/D	Jan-Apr	0.5-1.5	>6.0	---	---	None	Brief	Occasional
		May-Jun	---	---	---	---	None	---	---
		Jul-Sep	0.5-1.5	>6.0	---	---	None	Brief	Occasional
		Oct-Nov	---	---	---	---	None	---	---
		Dec	0.5-1.5	>6.0	---	---	None	Brief	Occasional
113: Pits-----	---	Jan-Dec	---	---	---	---	None	---	None
Udorthents---	B	Jan-Dec	---	---	---	---	None	---	None
116: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
117: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
119: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
121: Goldsboro----	C	Jan-Apr	2.0-3.0	>6.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	2.0-3.0	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	2.0-3.0	>6.0	---	---	None	---	None
122: Goldsboro----	C	Jan-Apr	2.0-3.0	>6.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	2.0-3.0	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	2.0-3.0	>6.0	---	---	None	---	None
123: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Lakeland-----	A	Jan-Dec	---	---	---	---	None	---	None
127: Goldsboro----	C	Jan-Apr	2.0-3.0	>6.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	2.0-3.0	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	2.0-3.0	>6.0	---	---	None	---	None
128: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Bonneau-----	B	Jan-Apr	3.5-5.0	>6.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.5-5.0	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	3.5-5.0	>6.0	---	---	None	---	None
129: Blanton-----	A	Jan-Mar	3.5-5.5	4.0-6.0	---	---	None	---	None
		Apr-Jun	---	---	---	---	None	---	None
		Jul-Sep	3.5-5.5	4.0-6.0	---	---	None	---	None
		Oct-Dec	---	---	---	---	None	---	None
Bonneau-----	B	Jan-Apr	3.5-5.0	>6.0	---	---	None	---	None
		May-Jul	---	---	---	---	None	---	None
		Aug-Sep	3.5-5.0	>6.0	---	---	None	---	None
		Oct-Nov	---	---	---	---	None	---	None
		Dec	3.5-5.0	>6.0	---	---	None	---	None

Soil Survey of Washington County, Florida

Table 20.--Taxonomic Classification of the Soils

Soil name	Family or higher taxonomic class
Albany-----	Loamy, siliceous, subactive, thermic Aquic Arenic Paleudults
Arents-----	Thermic Arents
Bayboro-----	Fine, mixed, semiactive, thermic Umbric Paleaquults
Bladen-----	Fine, mixed, semiactive, thermic Typic Albaquults
Blanton-----	Loamy, siliceous, semiactive, thermic Grossarenic Paleudults
Bonifay-----	Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults
Bonneau-----	Loamy, siliceous, subactive, thermic Arenic Paleudults
Chipley-----	Thermic, coated Aquic Quartzipsamments
Clara-----	Siliceous, thermic Spodic Psammaquents
Cowarts-----	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Dothan-----	Fine-loamy, kaolinitic, thermic Plinthic Kandiudults
Dunbar-----	Fine, kaolinitic, thermic Aeric Paleaquults
Fuquay-----	Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults
Goldsboro----	Fine-loamy, siliceous, subactive, thermic Aquic Paleudults
Grady-----	Fine, kaolinitic, thermic Typic Paleaquults
Gritney-----	Fine, mixed, semiactive, thermic Aquic Hapludults
Hannon-----	Fine, smectitic, thermic Chromic Hapluderts
Hurricane----	Sandy, siliceous, thermic Oxyaquic Alorthods
Lakeland-----	Thermic, coated Typic Quartzipsamments
Leefield-----	Loamy, siliceous, subactive, thermic Arenic Plinthaquic Paleudults
Leon-----	Sandy, siliceous, thermic Aeric Alaquods
Lucy-----	Loamy, kaolinitic, thermic Arenic Kandiudults
Lynchburg----	Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults
Nankin-----	Fine, kaolinitic, thermic Typic Kanhapludults
Ocilla-----	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Oktibbeha----	Very-fine, smectitic, thermic Chromic Dystruderts
Orangeburg---	Fine-loamy, kaolinitic, thermic Typic Kandiudults
Pamlico-----	Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists
Pantego-----	Fine-loamy, siliceous, semiactive, thermic Umbric Paleaquults
Pickney-----	Sandy, siliceous, thermic Cumulic Humaquepts
Plummer-----	Loamy, siliceous, subactive, thermic Grossarenic Paleaquults
Pottsburg----	Sandy, siliceous, thermic Grossarenic Alaquods
Rains-----	Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults
Rutlege-----	Sandy, siliceous, thermic Typic Humaquepts
Searcy-----	Fine, mixed, active, thermic Aquic Paleudalfs
Troup-----	Loamy, kaolinitic, thermic Grossarenic Kandiudults
Udorthents---	Thermic Udorthents

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