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

## Soil Survey of Suwannee County, Florida



## How To Use This Soil Survey

## Detailed Soil Maps

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

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

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

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


MAP SHEET

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

Major fieldwork for this soil survey was completed in 2002. Soil names and descriptions were approved in 2003. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. This survey was made cooperatively by the Natural Resources Conservation Service and the University of Florida, Institute of Food and Agricultural Sciences, Agricultural Experiment Stations, and Soil and Water Science Department, and the Florida Department of Agriculture and Consumer Services.

The survey is part of the technical assistance furnished to the Suwannee County Soil and Water Conservation District. The Suwannee County Board of Commissioners contributed financially to the acceleration of this survey. Additional assistance was provided by the Florida Department of Transportation.

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: The Suwannee River, which forms the boundary between Suwannee and Madison Counties. Bigbee-Garcon-Meggett complex, occasionally flooded, is the dominant map unit along the river.

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

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

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

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

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

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


## Soil Survey of Suwannee County, Florida

By Robert L. Weatherspoon, Natural Resources Conservation Service<br>Fieldwork by Eddie Cummings, David Howell, Jeff Allen, Kevin Sullivan, Frank Watts, Kenneth Liudahl, and Alfred Jones, Natural Resources Conservation Service<br>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, and the Florida Department of Agriculture and Consumer Services

Suwannee County is in the northern part of Florida (fig. 1). Live Oak, the county seat, is on U.S. Highway 90 about midway between Tallahassee and Jacksonville. The boundaries of the county are the Suwannee River on the north, west, and southwest, the Ichetucknee and Santa Fe Rivers on the southeast, and Columbia County on the east. Suwannee County is approximately 34 miles long and 27 miles wide. It has a land area of 433,280 acres, or about 677 square miles. The principal crops grown in the county are bright tobacco, watermelons, corn, peanuts, soybeans, small grains, and a few vegetables. Tobacco is the main cash crop. Livestock and poultry raising are also major enterprises.

This soil survey updates the 1965 Soil Survey of Suwannee County, Florida (USDA-SCS, 1965).

## General Nature of the County

This section gives general information about the climate, history and development, farming, and recreation in the county.

## Climate

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

Table 1 gives data on temperature and precipitation for the survey area as recorded by the climate station at Live Oak, Florida, in the period 1971 to 2000. Table $\underline{2}$ shows probable dates of the first freeze in fall and the last freeze in spring.

In winter, the average temperature is 60 degrees $F$ and the average daily minimum temperature is 47 degrees. The lowest temperature on record, which occurred on


Figure 1.-Location of Suwannee County in Florida.

January 21, 1985, is 6 degrees. In summer, the average temperature is 81.4 degrees and the average daily maximum temperature is 92.6 degrees. The highest recorded temperature, which occurred on June 6, 1985, is 106 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature ( 50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 52.92 inches. Of this, 40.87 inches, or 77 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 20 inches. The heaviest 1-day rainfall during the period of record was 12.95 inches on September 12, 1964. Thunderstorms occur on about 82 days each year, and most occur between mid-May and mid-September.

The average seasonal snowfall is 0.1 inch. The greatest snow depth at any one time during the period of record was 2 inches recorded on December 23, 1989. On average, less than 1 day per year has at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 2.0 inches recorded on December 23, 1989.

The average relative humidity in mid-afternoon is about 45 percent in April and about 60 percent in August. Humidity is higher at night, and the average at dawn is about 90 to 95 percent in all months. The sun shines about 63 percent of the time possible in summer and about 58 percent in winter. The prevailing wind is from the south from February to July and from the north or northeast the remainder of the year. Average wind speed is highest, around 7 to 8 miles per hour, in February and March. Thunderstorm days, relative humidity, percent sunshine, and wind information are estimated from the first order station at Tallahassee, Florida.

## History and Development

By Jim Senterfitt, retired district conservationist, Natural Resources Conservation Service, and chairman of the Suwannee County Soil and Water Conservation District

Early American Indians occupied the north and north-central parts of Florida. The Timicuas Tribe lived in a town called Napticua between what is now known as Houston and Live Oak, Florida, from about 750 A.D. until 1839.

The first encounter between Europeans and Indians in Florida occurred when Hernando Desoto and his explorers clashed with the Timucan Indians. Most of the Indians were taken prisoners. When the tribe rebelled, most of the older tribesmen were killed and the younger tribesmen were taken as slaves.

Under the last Spanish occupation of Florida, Reuben and Rebecca Charles were probably the first permanent settlers in what is now Suwannee County. In 1824, the territorial council of Florida granted Reuben a charter to operate a ferry on the Suwannee River at Charles Springs. Reuben and Rebecca acquired about 1,000 acres on both sides of the river. They homesteaded as Suwannee County's first European settlers. Reuben and Rebecca built a home, an inn, and a trading post on the high bluff overlooking the Suwannee River where Charles Springs is located. Their homestead was a ferry crossing and stagecoach stop. The stagecoach ran from St. Augustine to Tallahassee along the old Spanish trail.

By 1842, the Seminole wars in North Florida had ended. The end of the wars brought a new influx of settlers. The population doubled and then tripled. There were two towns in the area: Columbus and Houston.

On December 21, 1858, the legislature signed an act separating Suwannee County from Columbia County. Suwannee County was created with an area of 433,280 acres approximately bounded by the Suwannee River on the north, west, and southwest. The south and southeast boundaries are the Ichetucknee and Santa Fe Rivers, which flow into the Suwannee River. An imaginary line makes up the east boundary with Columbia County.

Houston was the first county seat. Houston consisted of a post office, general mercantile store, blacksmith, and court house. The county seat was officially moved to Live Oak on August 1, 1868. It was moved because the rising population increased the demand for a more centrally located county seat. The county grew due to the completion of railroads from Georgia to the Gulf and east and west through Live Oak.

At one time, timber and naval stores were in great demand because of rapid growth in Florida. At this time the Dowling Land and Lumber Company owned a large acreage in western and southwestern Suwannee County and northern Lafayette County. The company harvested, manufactured, and shipped lumber all over Florida and other parts of the country by rail.

Later, Richard W. Sears bought about 100,000 acres of cutover timberland, the Dowling saw mill, and timber stands. Sears manufactured prefab homes and sold them on terms, so much down and so much a month. Sears sold land in 20 acre parcels from 1910 through 1965 as the Suwannee Belt Land Company. During that period, he sold around 10,000 parcels of financed land.

## Farming

Suwannee County supports general farming and tree production. The main crops are corn, tobacco, soybeans, peanuts, watermelon, small grains, and a few vegetables. Most of the cropland is in the northern part of the county. Most of the soils that are used for crops are deep, droughty, and sandy. Historically, deep plowing and clean cultivation were used in the county. Gully-control structures, grassed waterways, windbreaks, and permanent vegetative cover are needed to help control erosion.

In 1942, the enactment of legislation to create soil conservation districts stirred the interest of many landowners in Suwannee County. Since then, the Suwannee County Soil and Water Conservation District has promoted farming, tree planting, and other farming practices. The goal of the District has been to help farmers, public agencies, and other land users solve problems related to soil and water conservation.

For more information regarding farming in the county, see "Crops and Pasture" in the "Use and Management" section of this publication.

## Recreation

Suwannee County provides a wide variety of recreational opportunities. Many of these opportunities come from the county's wide-open spaces and favorable weather. Suwannee Music Park and Campground is the most popular recreational site in the county. The crystal clear Suwannee River flows southward through the park and attracts thousands of swimmers, divers, canoeists, and other visitors each year. Camping, hiking, picnicking, and observing wildlife are also popular activities at this park. The rivers in the county provide opportunities for canoeing, kayaking, swimming, diving, and sightseeing. Organized recreational activities are available in and near Live Oak, where facilities are available for outdoor games, baseball, tennis, racquetball, and basketball. Civic clubs and church groups sponsor many of these activities.

## 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 fieldobserved characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

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

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

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

## Ground-Penetrating Radar

A ground-penetrating radar (GPR) system was used to document the type and variability of the soils in the detailed map units. Random transects were made with the GPR and by hand. Radar data, information from notes, and ground-truth observations made in the field were used to classify the soils and to determine the composition of the map units. The map units described in the section "Detailed Soil Map Units" are based on this data.

## Detailed Soil Map Units

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a soil series. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into soil phases. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpin fine sand, 0 to 5 percent slopes, is a phase of the Alpin series.

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

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

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

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. Udorthents-Pits complex, 1 to 8 percent slopes, is an example.

Table 3 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

## 2—Ocilla-Albany-Blanton complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Ocilla and similar soils: 40 percent
Albany and similar soils: 30 percent
Blanton and similar soils: 18 percent

## Contrasting inclusions

Bonneau soils: 5 percent
Chipley soils: 4 percent
Foxworth soils: 3 percent

## Component Descriptions

## Ocilla

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None

Depth to seasonal water saturation: 12 to 30 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3w
Surface layer:
0 to 3 inches; grayish brown sand
Subsurface layer:
3 to 13 inches; light yellowish brown sand
13 to 19 inches; very pale brown sand
19 to 24 inches; very pale brown sand that has reddish yellow and white mottles
24 to 29 inches; light yellowish brown loamy sand that has brownish yellow and light gray mottles

Subsoil:
29 to 34 inches; light yellowish brown fine sandy loam that has brownish yellow and light gray mottles
34 to 80 inches; light brownish gray sandy clay that has red, yellowish brown, and strong brown mottles

## Albany

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 12 to 30 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3e
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 27 inches; pale yellow fine sand
27 to 49 inches; white fine sand that has brownish yellow mottles
Subsoil:
49 to 60 inches; mottled yellowish red, yellowish brown, and light gray sandy loam 60 to 80 inches; light gray sandy clay loam that has brownish yellow and reddish yellow mottles

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low

## Shrink-swell potential: Low

Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion; wetness

- Erosion-control measures are needed if pastures are renovated.
- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 4-Blanton fine sand, 5 to 8 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 85 percent
Contrasting inclusions
Bonneau soils: 10 percent
Chipley soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

## Cropland

Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 5-Blanton-Bonneau complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 59 percent
Bonneau and similar soils: 36 percent

## Contrasting inclusions

Alpin soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray
sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches

Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand

Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam 74 to 80 inches; mottled gray and pink sandy clay loam

## Use and Management

## Cropland (fig. 2)

Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


Figure 2.-Watermelons growing in an area of Blanton-Bonneau complex, 0 to 5 percent slopes. This complex is excellent for the production of watermelons.

## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 7-Bigbee-Garcon-Meggett complex, occasionally flooded Map Unit Composition

## Major components

Bigbee and similar soils: 40 percent
Garcon and similar soils: 30 percent
Meggett and similar soils: 20 percent

## Contrasting inclusions

Chipley soils: 5 percent
Blanton soils: 5 percent

## Component Descriptions

## Bigbee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Stream terraces on marine terraces
Parent material: Sandy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Deep (40 to 60 inches)
Drainage class: Excessively drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 11—Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 9 inches; brown fine sand
Substratum:
9 to 20 inches; yellowish brown fine sand
20 to 36 inches; brownish yellow fine sand
36 to 55 inches; brown fine sand
55 to 80 inches; light gray sand

## Garcon

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate
Available water capacity: Low

Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: About 18 to 36 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 2w
Surface layer:
0 to 7 inches; dark gray fine sand
Subsurface layer:
7 to 19 inches; brown fine sand
19 to 26 inches; very pale brown fine sand
Subsoil:
26 to 40 inches; brownish yellow sandy clay loam that has strong brown and light brownish gray mottles
40 to 51 inches; light brownish gray sandy loam that has brownish yellow mottles
51 to 60 inches; very pale brown loamy fine sand that has brownish yellow mottles

## Substratum:

60 to 80 inches; very pale brown fine sand that has light gray mottles

## Meggett

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces
Parent material: Clayey marine and fluvial sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Slow
Available water capacity: High
Shrink-swell potential: High
Flooding: Occasional
Ponding: Occasional
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 6w
Surface layer:
0 to 4 inches; very dark brown fine sand
Subsurface layer:
4 to 11 inches; light brownish gray fine sand that has brown, pale brown, and grayish brown mottles

Subsoil:
11 to 31 inches; light brownish gray sandy clay that has red and strong brown mottles
31 to 40 inches; mottled yellowish brown and gray sandy clay
Substratum:
40 to 80 inches; light gray sandy clay loam that has brownish yellow mottles

## Use and Management

## Cropland

Management concerns: Wetness; flooding; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness; flooding

- A subsurface drainage system can help to lower the seasonal high water table.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 10-Blanton-Alpin complex, 0 to 5 percent slopes, occasionally flooded

## Map Unit Composition

## Major components

Blanton and similar soils: 45 percent
Alpin and similar soils: 38 percent
Contrasting inclusions
Chipley soils: 7 percent
Albany soils: 5 percent
Foxworth soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on stream terraces on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand

Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Alpin

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on stream terraces on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides; flooding

- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.


## Pastureland

Management concerns: Flooding

- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 11—Bonneau-Blanton-Padlock complex, 0 to 5 percent slopes

## Map Unit Composition

Major components
Bonneau and similar soils: 40 percent
Blanton and similar soils: 30 percent
Padlock and similar soils: 20 percent

## Contrasting inclusions

Alpin soils: 5 percent
Chipley soils: 5 percent

## Component Descriptions

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand

Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam
74 to 80 inches; mottled gray and pink sandy clay loam

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None

Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles
Padlock
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Clayey marine deposits
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4e
Surface layer:
0 to 5 inches; very dark grayish brown fine sand
Subsoil:
5 to 13 inches; yellowish red sandy clay
13 to 17 inches; strong brown sandy clay that has dark yellowish brown and yellowish brown mottles
17 to 22 inches; dark yellowish brown sandy clay that has yellowish brown and pale brown mottles
22 to 51 inches; light brownish gray sandy clay that has strong brown, dark brown, and light gray mottles
51 to 63 inches; light brownish gray sandy clay that has strong brown and dark brown mottles
63 to 80 inches; light gray sandy clay that has dark brown and strong brown mottles

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 12—Blanton-Chiefland-Ichetucknee complex, 5 to 8 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 38 percent
Chiefland and similar soils: 28 percent
Ichetucknee and similar soils: 22 percent
Contrasting inclusions
Alpin soils: 7 percent
Albany soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Hills on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles

48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Chiefland

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on karst marine terraces
Parent material: Sandy and loamy marine deposits over limestone
Slope: 5 to 8 percent
Depth to restrictive feature: Moderately deep (20 to 40 inches to paralithic bedrock)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 8 inches; brown fine sand
Subsurface layer:
8 to 33 inches; pale brown fine sand that has brownish yellow and brown splotches and streaks

Subsoil:
33 to 39 inches; strong brown fine sandy loam

## Substratum:

39 to 80 inches; very pale brown, soft limestone bedrock

## Ichetucknee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on karst marine terraces
Parent material: Sandy and clayey marine deposits over limestone
Slope: 5 to 8 percent
Depth to restrictive feature: Deep ( 40 to 60 inches to bedrock)
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 6e
Surface layer:
0 to 5 inches; gray fine sand
Subsurface layer:
5 to 13 inches; light gray fine sand

Subsoil:
13 to 39 inches; pale brown clay that has gray, brownish yellow, and red mottles 39 to 55 inches; yellowish red clay
Substratum:
55 to 80 inches; very pale brown, soft and hard limestone

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining or increasing the content of organic matter in the soils helps to prevent crusting, improves tilth, and increases the rate of water infiltration.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 13-Blanton-Alpin-Bonneau complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 42 percent
Alpin and similar soils: 33 percent
Bonneau and similar soils: 16 percent

## Contrasting inclusions

Albany soils: 5 percent
Chipley soils: 4 percent
Component Descriptions
Blanton
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches

Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Alpin

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low

## Shrink-swell potential: Low

Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 2 s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand

Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam 74 to 80 inches; mottled gray and pink sandy clay loam

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining or increasing the content of organic matter in the soils helps to prevent crusting, improves tilth, and increases the rate of water infiltration.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 14-Blanton-Bonneau complex, 5 to 8 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 51 percent
Bonneau and similar soils: 37 percent
Contrasting inclusions
Alpin soils: 7 percent
Albany soils: 5 percent
Component Descriptions
Blanton
Major Land Resource Area: 138—North-Central Florida Ridge

Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping
15 to 27 inches; brownish yellow fine sand
Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam

58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam 74 to 80 inches; mottled gray and pink sandy clay loam

## Use and Management

Cropland
Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.

Pastureland
Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 15-Blanton-Lynchburg-Bonneau complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 35 percent
Lynchburg and similar soils: 30 percent
Bonneau and similar soils: 28 percent

## Contrasting inclusions

Falmouth soils: 4 percent
Albany soils: 3 percent

## Component Descriptions

Blanton<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy and loamy marine sediments<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Moderately well drained<br>Slowest permeability: Moderately slow<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: 42 to 72 inches<br>Ecological community: 4—Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3s<br>Surface layer:<br>0 to 5 inches; dark gray fine sand

Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Lynchburg

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2w
Surface layer:
0 to 7 inches; very dark grayish brown loamy fine sand
Subsurface layer:
7 to 9 inches; dark gray loamy fine sand
9 to 17 inches; light gray loamy fine sand that has yellowish brown mottles
Subsoil:
17 to 23 inches; pale brown sandy clay loam that has strong brown and light gray mottles
23 to 61 inches; light brownish gray sandy clay loam that has strong brown mottles 61 to 80 inches; mottled light brownish gray, yellowish brown, and light reddish brown sandy clay loam

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches

Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand
Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam 74 to 80 inches; mottled gray and pink sandy clay loam

## Use and Management

Cropland
Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 17-Falmouth-Bonneau-Blanton complex, 0 to 5 percent slopes

Map Unit Composition

## Major components

Falmouth and similar soils: 36 percent
Bonneau and similar soils: 30 percent
Blanton and similar soils: 22 percent
Contrasting inclusions
Alpin soils: 7 percent
Albany soils: 5 percent

## Component Descriptions

## Falmouth

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Clayey marine deposits
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow

Available water capacity: High
Shrink-swell potential: High
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4 e
Surface layer:
0 to 3 inches; very dark gray fine sand
Subsurface layer:
3 to 10 inches; dark grayish brown fine sand
Subsoil:
10 to 17 inches; yellowish brown sandy clay loam that has yellowish red mottles
17 to 30 inches; brown sandy clay that has grayish brown and yellowish red mottles
30 to 43 inches; gray sandy clay that has yellowish brown and yellowish red mottles
43 to 65 inches; gray sandy clay that has yellowish brown and strong brown mottles
Substratum:
65 to 80 inches; mottled strong brown, gray, yellowish brown, and brown sandy clay

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping
15 to 27 inches; brownish yellow fine sand
Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam
74 to 80 inches; mottled gray and pink sandy clay loam

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments

Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray
sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

Cropland
Management concerns: Erosion

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 18-Otela-Chiefland-Ichetucknee complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Otela and similar soils: 42 percent Chiefland and similar soils: 30 percent Ichetucknee and similar soils: 18 percent

## Contrasting inclusions

Pedro Variant soils: 5 percent
Blanton soils: 5 percent

## Component Descriptions

Otela
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy and loamy marine sediments over limestone
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 48 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 6 inches; dark grayish brown fine sand
Subsurface layer:
6 to 21 inches; brown fine sand
21 to 31 inches; pale brown fine sand that has dark brown and brownish yellow mottles
31 to 40 inches; very pale brown fine sand that has dark brown mottles
40 to 60 inches; yellowish brown fine sand
Subsoil:
60 to 65 inches; yellowish brown sandy loam that has dark brown mottles
65 to 75 inches; yellowish brown sandy loam that has white and dark brown mottles
75 to 80 inches; light gray sandy clay loam that has yellowish brown mottles

## Chiefland

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on karst marine terraces
Parent material: Sandy and loamy marine deposits over limestone
Slope: 0 to 5 percent
Depth to restrictive feature: Moderately deep (20 to 40 inches to paralithic limestone bedrock)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 8 inches; brown fine sand

Subsurface layer:
8 to 33 inches; pale brown fine sand that has brownish yellow and brown splotches and streaks

Subsoil:
33 to 39 inches; strong brown fine sandy loam
Substratum:
39 to 80 inches; very pale brown, soft limestone bedrock
Ichetucknee
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on karst marine terraces
Parent material: Sandy and clayey marine deposits over limestone
Slope: 0 to 5 percent
Depth to restrictive feature: Deep (40 to 60 inches to limestone bedrock)
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4e
Surface layer:
0 to 5 inches; gray fine sand
Subsurface layer:
5 to 13 inches; light gray fine sand
Subsoil:
13 to 39 inches; pale brown clay that has gray, brownish yellow, and red mottles
39 to 55 inches; yellowish red clay
Substratum:
55 to 80 inches; very pale brown, soft and hard limestone

## Use and Management

## Cropland

Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 19-Chiefland fine sand, occasionally flooded

## Map Unit Composition

Major components
Chiefland and similar soils: 85 percent

## Contrasting inclusions

Otela soils: 10 percent
Ichetucknee soils: 5 percent

## Component Descriptions

## Chiefland

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Knolls on karst marine terraces
Parent material: Sandy and loamy marine deposits over limestone
Slope: 0 to 2 percent
Depth to restrictive feature: Moderately deep (20 to 40 inches to paralithic limestone bedrock)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 8 inches; brown fine sand
Subsurface layer:
8 to 33 inches; pale brown fine sand that has brownish yellow and brown splotches and streaks

Subsoil:
33 to 39 inches; strong brown fine sandy loam
Substratum:
39 to 80 inches; very pale brown, soft limestone bedrock

## Use and Management

Cropland
Management concerns: Occasional flooding; leaching of nutrients and pesticides; erosion

- Measures are needed to protect the soil from scouring and to minimize the cropresidue loss caused by flooding.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.

Pastureland
Management concerns: Flooding; erosion

- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 20-Chiefland-Pedro Variant complex, occasionally flooded

## Map Unit Composition

## Major components

Chiefland and similar soils: 55 percent
Pedro Variant and similar soils: 35 percent

## Contrasting inclusions

Blanton soils: 10 percent

## Component Descriptions

## Chiefland

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Rises on stream terraces on karst marine terraces
Parent material: Sandy and loamy marine deposits over limestone
Slope: 0 to 2 percent
Depth to restrictive feature: Moderately deep (20 to 40 inches to paralithic limestone bedrock)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 8 inches; brown fine sand
Subsurface layer:
8 to 33 inches; pale brown fine sand that has brownish yellow and brown splotches and streaks

Subsoil:
33 to 39 inches; strong brown fine sandy loam
Substratum:
39 to 80 inches; very pale brown, soft limestone bedrock

## Pedro Variant

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on stream terraces on karst marine terraces
Parent material: Sandy and loamy marine sediments over limestone
Slope: 0 to 2 percent
Depth to restrictive feature: Shallow (10 to 20 inches to bedrock)
Drainage class: Well drained
Slowest permeability: Moderately rapid

Available water capacity: Very low
Shrink-swell potential: Moderate
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 3 inches; gray fine sand
Subsurface layer:
3 to 8 inches; brown fine sand
Subsoil:
8 to 11 inches; dark brown sandy clay loam
Substratum:
11 to 14 inches; very pale brown, soft weathered limestone
14 to 80 inches; hard limestone bedrock

## Use and Management

## Cropland

Management concerns: Occasional flooding; leaching of nutrients and pesticides; erosion

- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.


## Pastureland

Management concerns: Flooding; erosion

- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 21-Alaga loamy fine sand, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Alaga and similar soils: 80 percent
Contrasting inclusions
Blanton soils: 10 percent
Alpin soils: 10 percent

## Component Descriptions

Alaga<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy marine deposits<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Somewhat excessively drained<br>Slowest permeability: Rapid<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: More than 6 feet<br>Ecological community: 4—Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3s

Surface layer:
0 to 4 inches; very dark grayish brown loamy sand
4 to 9 inches; dark brown loamy sand
Substratum:
9 to 29 inches; brown loamy sand
29 to 58 inches; strong brown loamy sand
58 to 72 inches; reddish yellow sand
72 to 80 inches; brownish yellow sand

## Use and Management

Cropland
Management concerns: Excessive leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 22-Blanton-Padlock-Alpin complex, 0 to 5 percent slopes

Map Unit Composition

## Major components

Blanton and similar soils: 39 percent
Padlock and similar soils: 32 percent
Alpin and similar soils: 18 percent

## Contrasting inclusions

Chipley soils: 6 percent
Albany soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Padlock

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Clayey marine deposits
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4e
Surface layer:
0 to 5 inches; very dark grayish brown fine sand

Subsoil:
5 to 13 inches; yellowish red sandy clay
13 to 17 inches; strong brown sandy clay that has dark yellowish brown and yellowish brown mottles
17 to 22 inches; dark yellowish brown sandy clay that has yellowish brown and pale brown mottles
22 to 51 inches; light brownish gray sandy clay that has strong brown, dark brown, and light gray mottles
51 to 63 inches; light brownish gray sandy clay that has strong brown and dark brown mottles
63 to 80 inches; light gray sandy clay that has dark brown and strong brown mottles
Alpin
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

Cropland
Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland (fig. 3), building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


Figure 3.-Planted pines in an area of Blanton-Padlock-Alpin complex, 0 to 5 percent slopes.

## 25-Pantego fine sandy loam

## Map Unit Composition

## Major components

Pantego and similar soils: 90 percent

## Contrasting inclusions

Surrency soils: 10 percent

## Component Descriptions

## Pantego

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on marine terraces
Parent material: Loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent

Depth to seasonal water saturation: 0 to 18 inches
Ecological community: 21—Swamp Hardwoods
Nonirrigated land capability classification: 7w
Surface layer:
0 to 10 inches; black fine sandy loam
Subsurface layer:
10 to 14 inches; light brownish gray fine sandy loam
Subsoil:
14 to 18 inches; light gray sandy clay loam that has brownish yellow mottles
18 to 45 inches; light brownish gray sandy clay loam that has brownish yellow mottles
Substratum:
45 to 80 inches; grayish brown sandy clay that has white sand coatings

## Use and Management

Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


## 26-Hurricane, Albany, and Chipley soils, 0 to 3 percent slopes

## Map Unit Composition

## Major components

Hurricane and similar soils: 39 percent
Albany and similar soils: 32 percent
Chipley and similar soils: 23 percent

## Contrasting inclusions

Foxworth soils: 4 percent
Blanton soils: 2 percent
Component Descriptions

## Hurricane

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 3 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 24 to 42 inches

Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; dark grayish brown fine sand
Subsurface layer:
6 to 20 inches; light yellowish brown fine sand that has black charcoal fragments and white streaks and splotches
20 to 29 inches; pale brown fine sand that has brownish yellow and light brownish gray mottles
29 to 65 inches; light gray fine sand that has yellowish brown mottles
65 to 72 inches; light brownish gray sand
Subsoil:
72 to 80 inches; dark reddish brown fine sand

## Albany

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 3 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 12 to 30 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3e
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 27 inches; pale yellow fine sand
27 to 49 inches; white fine sand that has brownish yellow mottles
Subsoil:
49 to 60 inches; mottled yellowish red, yellowish brown, and light gray sandy loam
60 to 80 inches; light gray sandy clay loam that has brownish yellow and reddish yellow mottles

## Chipley

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 3 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 24 to 36 inches

Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 6 inches; grayish brown fine sand

## Substratum:

6 to 23 inches; yellowish brown fine sand
23 to 47 inches; very pale brown fine sand that has dark brown, yellowish brown, yellow, and very pale brown mottles
47 to 80 inches; white fine sand that has yellow and reddish yellow mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Wetness; erosion

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 29-Alpin fine sand, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Alpin and similar soils: 80 percent

## Contrasting inclusions

Blanton soils: 10 percent
Chipley soils: 10 percent

## Component Descriptions

Alpin<br>Major Land Resource Area: 138—North-Central Florida Ridge Landform: Ridges on marine terraces Parent material: Sandy marine deposits<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Excessively drained<br>Slowest permeability: Moderately rapid<br>Available water capacity: Very low<br>Shrink-swell potential: Low

## Flooding: None

Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

## Cropland

Management concerns: Droughtiness; excessive leaching of nutrients and pesticides; erosion

- The coarse texture prevents the soil from retaining sufficient moisture during dry periods, resulting in seasonal droughtiness as a management concern.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Droughtiness; erosion

- The coarse texture prevents the soil from retaining sufficient moisture during dry periods, resulting in seasonal droughtiness as a management concern.
- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 30-Alpin fine sand, 5 to 12 percent slopes

## Map Unit Composition

## Major components

Alpin and similar soils: 85 percent

## Contrasting inclusions

Chipley soils: 10 percent
Blanton soils: 5 percent

## Component Descriptions

## Alpin

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces

Parent material: Sandy marine deposits
Slope: 5 to 12 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 6s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

## Cropland

Management concerns: Droughtiness; excessive leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Supplemental irrigation may be required during dry periods.


## Pastureland

Management concerns: Droughtiness; erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 32-Leon fine sand

## Map Unit Composition

## Major components

Leon and similar soils: 80 percent

## Contrasting inclusions

Sapelo soils: 10 percent
Mascotte soils: 5 percent
Plummer soils: 5 percent

## Component Descriptions

## Leon

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 7—North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 4 inches; black fine sand
Subsurface layer:
4 to 10 inches; light brownish gray fine sand
Subsoil:
10 to 17 inches; dark reddish brown fine sand that has black and dark brown mottles
17 to 24 inches; brown fine sand that has black and dark brown mottles
24 to 44 inches; light gray fine sand
44 to 63 inches; light brownish gray fine sand that has dark brown mottles
63 to 80 inches; very dark brown fine sand that has yellowish brown mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 34-Falmouth-Bonneau-Blanton complex, 5 to 8 percent slopes

Map Unit Composition

## Major components

Falmouth and similar soils: 40 percent
Bonneau and similar soils: 30 percent
Blanton and similar soils: 20 percent

## Contrasting inclusions

Ocilla soils: 5 percent
Albany soils: 5 percent

## Component Descriptions

Falmouth
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Hills on marine terraces
Parent material: Clayey marine deposits
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow
Available water capacity: High
Shrink-swell potential: High
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4 e
Surface layer:
0 to 3 inches; very dark gray fine sand
Subsurface layer:
3 to 10 inches; dark grayish brown fine sand
Subsoil:
10 to 17 inches; yellowish brown sandy clay loam that has yellowish red mottles
17 to 30 inches; brown sandy clay that has grayish brown and yellowish red mottles
30 to 43 inches; gray sandy clay that has yellowish brown and yellowish red mottles
43 to 65 inches; gray sandy clay that has yellowish brown and strong brown mottles

## Substratum:

65 to 80 inches; mottled strong brown, gray, yellowish brown, and brown sandy clay

## Bonneau

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand

Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam
74 to 80 inches; mottled gray and pink sandy clay loam

## Blanton

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

## Cropland

Management concerns: Erosion

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 35-Mascotte-Sapelo complex

## Map Unit Composition

## Major components

Mascotte and similar soils: 51 percent
Sapelo and similar soils: 30 percent

## Contrasting inclusions

Albany soils: 10 percent
Ocilla soils: 9 percent

## Component Descriptions

## Mascotte

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 6 to 12 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; black fine sand
Subsurface layer:
6 to 15 inches; gray fine sand that has dark gray mottles
Subsoil:
15 to 19 inches; black fine sand that has very dark gray mottles
19 to 25 inches; dark reddish brown fine sand that has dark brown mottles
25 to 35 inches; yellowish brown fine sand that has black mottles
35 to 37 inches; black fine sand
37 to 55 inches; light brownish gray fine sandy loam that has yellowish brown and brownish yellow mottles
55 to 67 inches; gray fine sandy loam that has reddish yellow mottles
67 to 80 inches; light olive gray sandy loam that has reddish yellow mottles

## Sapelo

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None

Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 10 inches; dark gray fine sand
Subsurface layer:
10 to 22 inches; light gray fine sand
Subsoil:
22 to 23 inches; mottled black and dark reddish brown fine sand
23 to 28 inches; reddish brown fine sand
28 to 33 inches; yellowish brown fine sand
33 to 43 inches; light yellowish brown fine sand
43 to 54 inches; pale yellow fine sand
54 to 80 inches; light brownish gray sandy loam that has yellowish brown and strong brown mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Subsurface drains can become filled with sand, resulting in reduced effectiveness.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


## 38-Alpin fine sand, 0 to 5 percent slopes, occasionally flooded

## Map Unit Composition

## Major components

Alpin and similar soils: 91 percent

## Contrasting inclusions

Blanton soils: 5 percent
Foxworth soils: 4 percent

## Component Descriptions

## Alpin

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on stream terraces on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 11—Upland Hardwood Hammocks
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles
Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

## Cropland

Management concerns: Occasional flooding; excessive leaching of nutrients and pesticides; erosion

- Measures are needed to protect the soil from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and help to minimize the soil loss caused by erosion and flooding.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Occasional flooding; erosion

- Measures are needed to protect the soil from scouring and to minimize the cropresidue loss caused by flooding.
- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 39-Sapelo-Mascotte-Albany complex, frequently flooded

## Map Unit Composition

## Major components

Sapelo and similar soils: 45 percent
Mascotte and similar soils: 30 percent
Albany and similar soils: 21 percent
Contrasting inclusions
Ocilla soils: 4 percent

## Component Descriptions

Sapelo
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Flats on stream terraces on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: None
Depth to seasonal water saturation: About 6 to 18 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 10 inches; dark gray fine sand
Subsurface layer:
10 to 22 inches; light gray fine sand
Subsoil:
22 to 23 inches; mottled black and dark reddish brown fine sand
23 to 28 inches; reddish brown fine sand
28 to 33 inches; yellowish brown fine sand
33 to 43 inches; light yellowish brown fine sand
43 to 54 inches; pale yellow fine sand
54 to 80 inches; light brownish gray sandy loam that has yellowish brown and strong
brown mottles
Mascotte
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Flats on stream terraces on marine terraces
Parent material: Loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: None
Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; black fine sand
Subsurface layer:
6 to 15 inches; gray fine sand that has dark gray mottles
Subsoil:
15 to 19 inches; black fine sand that has very dark gray mottles
19 to 25 inches; dark reddish brown fine sand that has dark brown mottles

25 to 35 inches; yellowish brown fine sand that has black mottles
35 to 37 inches; black fine sand
37 to 55 inches; light brownish gray fine sandy loam that has yellowish brown and brownish yellow mottles
55 to 67 inches; gray fine sandy loam that has reddish yellow mottles
67 to 80 inches; light olive gray sandy loam that has reddish yellow mottles

Albany<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Rises on stream terraces on marine terraces<br>Parent material: Sandy and loamy marine sediments<br>Slope: 0 to 2 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Somewhat poorly drained<br>Slowest permeability: Moderately slow<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: Occasional<br>Ponding: None<br>Depth to seasonal water saturation: 12 to 30 inches<br>Ecological community: 7—North Florida Flatwoods<br>Nonirrigated land capability classification: 3e<br>Surface layer:<br>0 to 7 inches; black fine sand<br>Subsurface layer:<br>7 to 27 inches; pale yellow fine sand<br>27 to 49 inches; white fine sand that has brownish yellow mottles<br>Subsoil:<br>49 to 60 inches; mottled yellowish red, yellowish brown, and light gray sandy loam<br>60 to 80 inches; light gray sandy clay loam that has brownish yellow and reddish yellow mottles

## Use and Management

## Cropland

Management concerns: Wetness; flooding; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Wetness; flooding

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 41-Fluvaquents-Meggett-Bigbee complex, frequently flooded

## Map Unit Composition

## Major components

Fluvaquents and similar soils: 40 percent
Meggett and similar soils: 30 percent
Bigbee and similar soils: 20 percent

## Contrasting inclusions

Chipley soils: 5 percent
Blanton soils: 5 percent

## Component Descriptions

Fluvaquents
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces
Parent material: Marine deposits; alluvium
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Not rated
Available water capacity: Not rated
Shrink-swell potential: Not rated
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 6 inches
Ecological community: 21—Swamp Hardwoods
Nonirrigated land capability classification: 7w
Surface layer:
0 to 6 inches; very dark brown mucky fine sand
Subsurface layer:
6 to 11 inches; light brownish gray sandy clay loam
Subsoil:
11 to 31 inches; light brownish gray fine sand
31 to 40 inches; mottled gray and yellowish brown sandy clay loam
Substratum:
40 to 80 inches; white sandy clay loam

## Meggett

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces
Parent material: Clayey marine and fluvial sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Slow
Available water capacity: Low
Shrink-swell potential: High
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches

Ecological community: 21—Swamp Hardwoods
Nonirrigated land capability classification: 6w
Surface layer:
0 to 4 inches; very dark brown fine sand
Subsurface layer:
4 to 11 inches; light brownish gray fine sand that has brown, pale brown, and grayish brown mottles

Subsoil:
11 to 31 inches; light brownish gray sandy clay that has red and strong brown mottles
31 to 40 inches; mottled yellowish brown and gray sandy clay
Substratum:
40 to 80 inches; light gray sandy clay loam that has brownish yellow mottles

## Bigbee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Stream terraces on marine terraces
Parent material: Sandy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Deep (40 to 60 inches)
Drainage class: Excessively drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 5w
Surface layer:
0 to 9 inches; brown fine sand
Substratum:
9 to 20 inches; yellowish brown fine sand
20 to 36 inches; brownish yellow fine sand
36 to 55 inches; brown fine sand
55 to 80 inches; light gray sand

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides; flooding

- A subsurface drainage system can help to lower the seasonal high water table.
- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness; flooding

- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

# 43-Blanton-Foxworth-Alpin complex, 0 to 5 percent slopes 

## Map Unit Composition

## Major components

Blanton and similar soils: 35 percent
Foxworth and similar soils: 30 percent
Alpin and similar soils: 25 percent

## Contrasting inclusions

Albany soils: 5 percent
Chipley soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 11—Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Foxworth

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy marine or eolian sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 48 to 72 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 11 inches; very dark gray fine sand

## Substratum:

11 to 35 inches; brown fine sand
35 to 46 inches; light yellowish brown fine sand
46 to 54 inches; yellow fine sand that has yellow and pale brown mottles
54 to 62 inches; very pale brown fine sand that has pale brown and yellow mottles
62 to 67 inches; very pale brown fine sand that has very pale brown mottles
67 to 80 inches; very pale brown fine sand
Alpin
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Slowest permeability: Moderately rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 72 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 4 s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Use and Management

## Cropland

Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 45-Chipley-Foxworth-Albany complex, 0 to 5 percent slopes

Map Unit Composition

## Major components

Chipley and similar soils: 55 percent
Foxworth and similar soils: 25 percent
Albany and similar soils: 15 percent

## Contrasting inclusions

Blanton soils: 5 percent

## Component Descriptions

## Chipley

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 24 to 36 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 6 inches; grayish brown fine sand
Substratum:
6 to 23 inches; yellowish brown fine sand
23 to 47 inches; very pale brown fine sand that has dark brown, yellowish brown, yellow, and very pale brown mottles
47 to 80 inches; white fine sand that has yellow and reddish yellow mottles

## Foxworth

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy marine or eolian sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low

Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: 48 to 72 inches<br>Ecological community: 4-Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3s

## Surface layer:

0 to 11 inches; very dark gray fine sand

## Substratum:

11 to 35 inches; brown fine sand
35 to 46 inches; light yellowish brown fine sand
46 to 54 inches; yellow fine sand that has yellow and pale brown mottles
54 to 62 inches; very pale brown fine sand that has pale brown and yellow mottles
62 to 67 inches; very pale brown fine sand that has very pale brown mottles
67 to 80 inches; very pale brown fine sand

Albany<br>Major Land Resource Area: 138-North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy and loamy marine sediments<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Somewhat poorly drained<br>Slowest permeability: Moderately slow<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: 12 to 30 inches<br>Ecological community: 4-Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3e

Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 27 inches; pale yellow fine sand
27 to 49 inches; white fine sand that has brownish yellow mottles
Subsoil:
49 to 60 inches; mottled yellowish red, yellowish brown, and light gray sandy loam
60 to 80 inches; light gray sandy clay loam that has brownish yellow and reddish yellow mottles

## Use and Management

Cropland (fig. 4)
Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


Figure 4.-Bell peppers planted in an area of Chipley-Foxworth-Albany complex, 0 to 5 percent slopes.

## Pastureland

Management concerns: Wetness; erosion

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 46-Pamlico-Olustee-Pottsburg complex, depressional

## Map Unit Composition

## Major components

Pamlico and similar soils: 40 percent
Olustee and similar soils: 32 percent
Pottsburg and similar soils: 25 percent

## Contrasting inclusions

Leon soils: 3 percent
Component Descriptions

## Pamlico

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on marine terraces

Parent material: Decomposed organic material underlain by sandy sediments Slope: 0 to 1 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Slowest permeability: Slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 7—North Florida Flatwoods
Nonirrigated land capability classification: 7 w
Surface layer:
0 to 22 inches; black muck
Substratum:
22 to 80 inches; light brownish gray fine sand that has dark brown organic stains

## Olustee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 3w
Surface layer:
0 to 5 inches; black fine sand
5 to 18 inches; very dark gray fine sand that has black mottles
Subsoil:
18 to 23 inches; dark reddish brown fine sand that has dark brown mottles
23 to 37 inches; light gray fine sand that has dark brown mottles
37 to 63 inches; light brownish gray fine sandy loam that has strong brown and yellowish brown mottles
Substratum:
63 to 80 inches; light brownish gray loamy fine sand that has yellowish brown and dark brown mottles

## Pottsburg

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on marine terraces
Parent material: Marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Low

Shrink-swell potential: Low
Flooding: None
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 7 inches; very dark gray sand
Subsurface layer:
7 to 19 inches; dark grayish brown sand that has gray and yellowish brown mottles
19 to 30 inches; light brownish gray sand that has strong brown and dark brown mottles
30 to 51 inches; light brownish gray sand that has dark reddish brown, very pale brown, yellowish brown, and dark brown mottles
51 to 65 inches; grayish brown loamy sand that has dark grayish brown mottles
Subsoil:
65 to 80 inches; dark reddish brown sand that has black mottles

## Use and Management

Cropland

- This map unit is not suited for use as cropland.

Pastureland

- This map unit is not suited for use as pastureland.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 47-Clara and Meadowbrook soils, frequently flooded

## Map Unit Composition

## Major components

Clara and similar soils: 55 percent
Meadowbrook and similar soils: 35 percent
Contrasting inclusions
Leon soils: 10 percent
Component Descriptions
Clara
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: Occasional
Depth to seasonal water saturation: 0 to 12 inches

Ecological community: 21—Swamp Hardwoods
Nonirrigated land capability classification: 6w
Surface layer:
0 to 6 inches; black muck
Subsurface layer:
6 to 18 inches; light brownish gray fine sand
Subsoil:
18 to 48 inches; brown fine sand that has dark brown organic stains
Substratum:
48 to 80 inches; light brownish gray fine sand

## Meadowbrook

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: Occasional
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 6w
Surface layer:
0 to 8 inches; very dark gray fine sand
Subsurface layer:
8 to 14 inches; light gray sand that has very dark gray mottles
14 to 31 inches; mottled brown and very pale brown fine sand that has dark brown stains
31 to 50 inches; light gray fine sand that has dark brown stains
50 to 64 inches; brown fine sand
Subsoil:
64 to 80 inches; gray fine sandy loam that has dark brown stains

## Use and Management

## Cropland

Management concerns: Flooding

- This map unit is generally not suited for use as cropland due to the flooding and wetness.


## Pastureland

Management concerns: Flooding

- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 49-Sapelo-Mascotte-Plummer complex

## Map Unit Composition

## Major components

Sapelo and similar soils: 62 percent
Mascotte and similar soils: 20 percent
Plummer and similar soils: 14 percent

## Contrasting inclusions

Albany soils: 4 percent

## Component Descriptions

Sapelo<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Flats on marine terraces<br>Parent material: Sandy and loamy marine deposits<br>Slope: 0 to 2 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Poorly drained<br>Slowest permeability: Moderate<br>Available water capacity: Low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: 0 to 6 inches<br>Ecological community: 7—North Florida Flatwoods<br>Nonirrigated land capability classification: 4w

Surface layer:
0 to 10 inches; dark gray fine sand
Subsurface layer:
10 to 22 inches; light gray fine sand
Subsoil:
22 to 23 inches; mottled black and dark reddish brown fine sand
23 to 28 inches; reddish brown fine sand
28 to 33 inches; yellowish brown fine sand
33 to 43 inches; light yellowish brown fine sand
43 to 54 inches; pale yellow fine sand
54 to 80 inches; light brownish gray sandy loam that has yellowish brown and strong brown mottles

## Mascotte

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 0 to 6 inches

Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; black fine sand
Subsurface layer:
6 to 15 inches; gray fine sand that has dark gray mottles
Subsoil:
15 to 19 inches; black fine sand that has very dark gray mottles
19 to 25 inches; dark reddish brown fine sand that has dark brown mottles
25 to 35 inches; yellowish brown fine sand that has black mottles
35 to 37 inches; black fine sand
37 to 55 inches; light brownish gray fine sandy loam that has yellowish brown and brownish yellow mottles
55 to 67 inches; gray fine sandy loam that has reddish yellow mottles
67 to 80 inches; light olive gray sandy loam that has reddish yellow mottles

## Plummer

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 0 to 6 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 4 w
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has yellowish brown mottles

## Subsoil:

55 to 80 inches; gray sandy clay loam that has white sand coatings and yellowish brown mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides; erosion

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.

Pastureland
Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 51-Plummer fine sand

## Map Unit Composition

## Major components

Plummer and similar soils: 85 percent
Contrasting inclusions
Albany soils: 8 percent
Sapelo soils: 7 percent

## Component Descriptions

## Plummer

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 6 to 12 inches
Ecological community: 7—North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has yellowish brown mottles
Subsoil:
55 to 80 inches; gray sandy clay loam that has white sand coatings and yellowish brown mottles

## Use and Management

## Cropland

Management concerns: Wetness; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 52-Plummer fine sand, depressional

## Map Unit Composition

## Major components

Plummer and similar soils: 90 percent

## Contrasting inclusions

Albany soils: 5 percent
Sapelo soils: 5 percent

## Component Descriptions

## Plummer

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Depressions on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 7—North Florida Flatwoods
Nonirrigated land capability classification: 5w
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has yellowish brown mottles
Subsoil:
55 to 80 inches; gray sandy clay loam that has white sand coatings and yellowish brown mottles

## Use and Management

## Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 54-Plummer muck, depressional

## Map Unit Composition

## Major components

Plummer and similar soils: 90 percent

## Contrasting inclusions

Albany soils: 5 percent
Sapelo soils: 5 percent

## Component Descriptions

Plummer (fig. 5)
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 1 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Slowest permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low


Figure 5.-Cypress trees in an area of Plummer muck, depressional. Such areas provide excellent habitat for wildlife.

Flooding: None
Ponding: Frequent
Depth to seasonal water saturation: About 0 to 12 inches
Ecological community: 7—North Florida Flatwoods
Nonirrigated land capability classification: 5w
Surface layer:
0 to 7 inches; black muck
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has yellowish brown mottles
Subsoil:
55 to 80 inches; gray sandy clay loam that has yellowish brown mottles and white coatings

## Use and Management

Cropland

- This map unit is not suited for use as cropland.

Pastureland

- This map unit is not suited for use as pastureland.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 59—Troup fine sand, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Troup and similar soils: 90 percent

## Contrasting inclusions

Blanton soils: 10 percent

## Component Descriptions

Troup<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy and loamy marine deposits<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Deep (40 to 60 inches)<br>Drainage class: Somewhat excessively drained<br>Slowest permeability: Moderate<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: More than 6 feet<br>Ecological community: 4—Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3s<br>Surface layer:<br>0 to 8 inches; dark brown fine sand

Subsurface layer:
8 to 38 inches; reddish yellow loamy sand
38 to 52 inches; strong brown loamy sand that has very pale brown mottles
Subsoil:
52 to 58 inches; strong brown fine sandy loam
58 to 67 inches; yellowish red sandy clay loam that has white sand coatings
67 to 80 inches; yellowish red sandy clay loam that has white sand coatings and brown mottles

## Use and Management

## Cropland

Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 60—Troup fine sand, 5 to 8 percent slopes

## Map Unit Composition

## Major components

Troup and similar soils: 85 percent

## Contrasting inclusions

Alaga soils: 10 percent
Bonneau soils: 5 percent

## Component Descriptions

## Troup

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 5 to 8 percent
Depth to restrictive feature: Deep (40 to 60 inches)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet

Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 8 inches; dark brown fine sand
Subsurface layer:
8 to 38 inches; reddish yellow loamy sand
38 to 52 inches; strong brown loamy sand that has very pale brown mottles
Subsoil:
52 to 58 inches; strong brown fine sandy loam
58 to 67 inches; yellowish red sandy clay loam that has white sand coatings
67 to 80 inches; yellowish red sandy clay loam that has white sand coatings and brown mottles

## Use and Management

Cropland
Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Maintaining or increasing the content of organic matter in the soil helps to prevent crusting, improves tilth, and increases the rate of water infiltration.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 61—Udorthents-Pits complex, 1 to 8 percent slopes

## Map Unit Composition

## Major components

Udorthents and similar areas: 80 percent
Pits and similar areas: 20 percent
Component Descriptions

## Udorthents

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Marine terraces
Parent material: Not determined
Slope: 1 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Not rated
Slowest permeability: Not rated
Available water capacity: Not rated
Shrink-swell potential: Not rated
Flooding: None
Ponding: None

Depth to seasonal water saturation: About 18 to 36 inches
Ecological community: Not rated
Nonirrigated land capability classification: 6s
Surface layer:
0 to 6 inches; grayish brown cobbly sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow sandy clay
44 to 65 inches; light yellowish brown fine sand
65 to 80 inches; mottled yellowish brown and light yellowish brown stratified fine sand to loamy fine sand

Pits
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Marine terraces
Parent material: Not determined
Slope: 1 to 8 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Not rated
Slowest permeability: Not rated
Available water capacity: Not rated
Shrink-swell potential: Not rated
Flooding: None
Ponding: None
Depth to seasonal water saturation: Not rated
Ecological community: Not rated
Nonirrigated land capability classification: Not rated
This miscellaneous area consists of open excavations from which soil and geologic material have been removed. This material is used for construction material, roadbeds, and fill. Included in this unit are areas of water. The pits range from 2 to 80 acres in size and are 3 to 20 feet deep.

## Use and Management

## Cropland

- This map unit is not suited for use as cropland.


## Pastureland

- This map unit is not suited for use as pastureland.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 65-Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded

## Map Unit Composition

## Major components

Garcon and similar soils: 55 percent
Eunola and similar soils: 40 percent
Contrasting inclusions
Otela soils: 5 percent

## Component Descriptions

## Garcon

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Rises on flood plains on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 2w
Surface layer:
0 to 7 inches; dark gray fine sand
Subsurface layer:
7 to 19 inches; brown fine sand
19 to 26 inches; very pale brown fine sand
Subsoil:
26 to 40 inches; brownish yellow sandy clay loam that has strong brown and light brownish gray mottles
40 to 51 inches; light brownish gray sandy loam that has brownish yellow mottles
51 to 60 inches; very pale brown loamy fine sand that has brownish yellow mottles
Substratum:
60 to 80 inches; very pale brown fine sand that has light gray mottles

## Eunola

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Stream terraces on marine terraces
Parent material: Fluvial or marine sediments
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 18 to 30 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 2w
Surface layer:
0 to 7 inches; very dark grayish brown fine sand
Subsurface layer:
7 to 18 inches; pale brown loamy fine sand that has strong brown mottles
Subsoil:
18 to 24 inches; yellowish brown sandy clay loam

24 to 27 inches; light yellowish brown sandy clay loam that has yellowish red and grayish brown mottles
27 to 35 inches; grayish brown sandy clay that has yellowish brown and red mottles
35 to 50 inches; light brownish gray sandy clay that has dark red mottles
50 to 56 inches; grayish brown sandy clay loam that has reddish brown mottles

## Substratum:

56 to 68 inches; brown loamy sand that has yellowish brown mottles
68 to 80 inches; pale brown sand that has brownish yellow mottles

## Use and Management

## Cropland

Management concerns: Flooding; erosion

- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness; flooding

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 68-Mascotte and Plummer soils, occasionally flooded

## Map Unit Composition

## Major components

Mascotte and similar soils: 55 percent
Plummer and similar soils: 35 percent
Contrasting inclusions
Bigbee soils: 5 percent
Blanton soils: 5 percent

## Component Descriptions

## Mascotte

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: Occasional
Depth to seasonal water saturation: 0 to 6 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 5w

## Surface layer:

0 to 6 inches; black fine sand
Subsurface layer:
6 to 15 inches; gray fine sand that has dark gray mottles
Subsoil:
15 to 19 inches; black fine sand that has very dark gray mottles
19 to 25 inches; dark reddish brown fine sand that has dark brown mottles
25 to 35 inches; yellowish brown fine sand that has black mottles
35 to 37 inches; black fine sand
37 to 55 inches; light brownish gray fine sandy loam that has yellowish brown and brownish yellow mottles
55 to 67 inches; gray fine sandy loam that has reddish yellow mottles
67 to 80 inches; light olive gray sandy loam that has reddish yellow mottles

## Plummer

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: Occasional
Depth to seasonal water saturation: 0 to 6 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 4w
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has strong brown mottles
Subsoil:
55 to 80 inches; gray sandy clay loam that has strong brown mottles and white coatings

## Use and Management

## Cropland

Management concerns: Wetness; flooding; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Measures are needed to protect the soils from scouring and to minimize the cropresidue loss caused by flooding.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Flooding; wetness

- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 69-Osier-Bibb-Albany complex, frequently flooded

## Map Unit Composition

## Major components

Osier and similar soils: 45 percent
Bibb and similar soils: 27 percent
Albany and similar soils: 18 percent
Contrasting inclusions
Plummer soils: 10 percent

## Component Descriptions

## Osier

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Rapid
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: Occasional
Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3w
Surface layer:
0 to 3 inches; very dark brown sand
3 to 8 inches; dark grayish brown fine sand
Substratum:
8 to 36 inches; light brownish gray fine sand
36 to 80 inches; light gray fine sand
Bibb
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy and loamy alluvial deposits
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Frequent

Ponding: Occasional<br>Depth to seasonal water saturation: 6 to 12 inches<br>Ecological community: 11-Upland Hardwood Hammocks<br>Nonirrigated land capability classification: 5w

Surface layer:
0 to 2 inches; very dark gray silt loam
2 to 17 inches; brown sandy loam

## Substratum:

17 to 30 inches; grayish brown sandy loam
30 to 42 inches; grayish brown sandy loam that has brownish yellow and gray mottles
42 to 80 inches; mottled light gray, grayish brown, and dark gray loamy fine sand

Albany<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Rises on flood plains on marine terraces<br>Parent material: Sandy and loamy marine sediments<br>Slope: 0 to 2 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Somewhat poorly drained<br>Slowest permeability: Moderately slow<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: Occasional<br>Ponding: None<br>Depth to seasonal water saturation: 12 to 30 inches<br>Ecological community: 11—Upland Hardwood Hammocks<br>Nonirrigated land capability classification: 3w

Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 27 inches; pale yellow fine sand
27 to 49 inches; white fine sand that has brownish yellow mottles
Subsoil:
49 to 60 inches; mottled yellowish red, yellowish brown, and light gray sandy loam
60 to 80 inches; light gray sandy clay loam that has brownish yellow and reddish yellow mottles

## Use and Management

Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Wetness; flooding

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 71-Otela-Alpin-Chiefland complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Otela and similar soils: 42 percent
Alpin and similar soils: 35 percent
Chiefland and similar soils: 20 percent

## Contrasting inclusions

Albany soils: 3 percent

## Component Descriptions

Otela<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Knolls on marine terraces<br>Parent material: Sandy and loamy marine sediments over limestone<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Moderately well drained<br>Slowest permeability: Slow<br>Available water capacity: Low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None<br>Depth to seasonal water saturation: 48 to 72 inches<br>Ecological community: 4—Longleaf Pine-Turkey Oak Hills<br>Nonirrigated land capability classification: 3s

Surface layer:
0 to 6 inches; dark grayish brown fine sand
Subsurface layer:
6 to 21 inches; brown fine sand
21 to 31 inches; pale brown fine sand that has dark brown and brownish yellow mottles
31 to 40 inches; very pale brown fine sand that has dark brown mottles
40 to 60 inches; yellowish brown fine sand
Subsoil:
60 to 65 inches; yellowish brown sandy loam that has dark brown mottles
65 to 75 inches; yellowish brown sandy loam that has white and dark brown mottles 75 to 80 inches; light gray sandy clay loam that has yellowish brown mottles

Alpin<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy marine deposits<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)<br>Drainage class: Excessively drained<br>Slowest permeability: Moderately rapid<br>Available water capacity: Very low<br>Shrink-swell potential: Low<br>Flooding: None<br>Ponding: None

Depth to seasonal water saturation: More than 6 feet Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; grayish brown fine sand
Subsurface layer:
6 to 20 inches; brown fine sand
20 to 44 inches; yellow fine sand that has very pale brown stripping
44 to 65 inches; light yellowish brown fine sand that has very dark grayish brown mottles

Subsoil:
65 to 80 inches; stratified very pale brown fine sand and yellowish brown loamy fine sand

## Chiefland

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Ridges on karst marine terraces
Parent material: Sandy and loamy marine deposits over limestone
Slope: 0 to 5 percent
Depth to restrictive feature: Moderately deep (20 to 40 inches to paralithic bedrock)
Drainage class: Moderately well drained
Slowest permeability: Moderate
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: More than 6 feet
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 8 inches; brown fine sand
Subsurface layer:
8 to 33 inches; pale brown fine sand that has brownish yellow and brown splotches and streaks

Subsoil:
33 to 39 inches; strong brown fine sandy loam
Substratum:
39 to 80 inches; very pale brown, soft limestone bedrock

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.

Pastureland (fig. 6)
Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


Figure 6.-A hayfield in an area of Otela-Alpin-Chiefland complex, 0 to 5 percent slopes.

## 72-Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded

## Map Unit Composition

## Major components

Ousley and similar soils: 30 percent
Blanton and similar soils: 28 percent
Fluvaquents and similar soils: 26 percent

## Contrasting inclusions

Albany soils: 10 percent
Garcon soils: 6 percent
Component Descriptions

## Ousley

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Stream terraces on flood plains on marine terraces

Parent material: Sandy fluvial sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 18 to 42 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3w
Surface layer:
0 to 4 inches; dark grayish brown fine sand

## Substratum:

4 to 24 inches; brown fine sand
24 to 40 inches; very pale brown fine sand
40 to 55 inches; light brownish gray fine sand
55 to 80 inches; light gray fine sand

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Stream terraces on flood plains on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: Occasional
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles
Fluvaquents
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces

Parent material: Sandy and loamy alluvium
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Not rated
Available water capacity: Not rated
Shrink-swell potential: Not rated
Flooding: Occasional
Ponding: Frequent
Depth to seasonal water saturation: About 0 to 12 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 7w
Surface layer:
0 to 6 inches; very dark brown mucky fine sand
Subsurface layer:
6 to 11 inches; light brownish gray sandy clay loam
Subsoil:
11 to 31 inches; light brownish gray fine sand
31 to 40 inches; mottled gray and yellowish brown sandy clay loam
Substratum:
40 to 80 inches; white sandy clay loam

## Use and Management

## Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Flooding; wetness; erosion

- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
- A subsurface drainage system can help to lower the seasonal high water table.
- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 73-Boulogne-Chipley-Hurricane complex, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Boulogne and similar soils: 35 percent
Chipley and similar soils: 30 percent
Hurricane and similar soils: 20 percent

## Contrasting inclusions

Blanton soils: 10 percent
Albany soils: 5 percent

## Component Descriptions

## Boulogne

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces

Parent material: Sandy marine sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderately rapid
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 6 to 18 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; very dark gray fine sand
Subsoil:
6 to 16 inches; dark brown fine sand
16 to 31 inches; light gray fine sand
Substratum:
31 to 39 inches; dark reddish brown fine sand
39 to 60 inches; black fine sand
60 to 80 inches; mottled dark reddish brown and black fine sand

## Chipley

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 24 to 36 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3s
Surface layer:
0 to 6 inches; grayish brown fine sand
Substratum:
6 to 23 inches; yellowish brown fine sand
23 to 47 inches; very pale brown fine sand that has dark brown, yellowish brown, yellow, and very pale brown mottles
47 to 80 inches; white fine sand that has yellow and reddish yellow mottles
Hurricane
Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Rises on marine terraces
Parent material: Sandy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid

Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 24 to 42 inches
Ecological community: 11-Upland Hardwood Hammocks
Nonirrigated land capability classification: 3w
Surface layer:
0 to 6 inches; dark grayish brown fine sand
Subsurface layer:
6 to 20 inches; light yellowish brown fine sand that has black charcoal fragments and white streaks and splotches
20 to 29 inches; pale brown fine sand that has brownish yellow and light brownish gray mottles
29 to 65 inches; light gray fine sand that has yellowish brown mottles
65 to 72 inches; light brownish gray sand
Subsoil:
72 to 80 inches; dark reddish brown fine sand

## Use and Management

## Cropland

Management concerns: Wetness; erosion; leaching of nutrients and pesticides

- A subsurface drainage system can help to lower the seasonal high water table.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Wetness

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 74-Surrency, Plummer, and Cantey soils, frequently flooded

## Map Unit Composition

## Major components

Surrency and similar soils: 35 percent
Plummer and similar soils: 30 percent
Cantey and similar soils: 25 percent

## Contrasting inclusions

Fluvaquents: 5 percent
Osier soils: 5 percent

## Component Descriptions

## Surrency

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces

Parent material: Marine and fluvial sediments
Slope: 0 to 1 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Slowest permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 6 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 6w
Surface layer:
0 to 8 inches; black fine sand
8 to 16 inches; very dark gray fine sand
Subsurface layer:
16 to 38 inches; gray fine sand
Subsoil:
38 to 80 inches; grayish brown sandy clay loam that has white sand coatings and yellowish brown mottles

## Plummer

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 1 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 21-Swamp Hardwoods
Nonirrigated land capability classification: 4 w
Surface layer:
0 to 7 inches; black fine sand
Subsurface layer:
7 to 14 inches; grayish brown fine sand
14 to 22 inches; gray fine sand
22 to 55 inches; light gray fine sand that has yellowish brown mottles
Subsoil:
55 to 80 inches; gray sandy clay loam that has yellowish brown mottles and white coatings

## Cantey

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Flats on flood plains on marine terraces
Parent material: Unconsolidated clayey sediments
Slope: 0 to 1 percent
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained
Slowest permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 21—Swamp Hardwoods
Nonirrigated land capability classification: 6w
Surface layer:
0 to 9 inches; very dark gray and gray sandy loam
Subsurface layer:
9 to 19 inches; light brownish gray sandy loam that has strong brown and gray mottles

Subsoil:
19 to 26 inches; light brownish gray sandy clay that has strong brown mottles
26 to 37 inches; gray sandy clay that has red and yellowish brown mottles
37 to 80 inches; gray sandy clay that has brownish yellow, strong brown, and light brownish gray mottles

## Use and Management

## Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Wetness; flooding

- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
- Forage production can be improved by seeding a grass-legume mixture that is tolerant of flooding.
Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


## 76-Wampee-Blanton complex, 5 to 12 percent slopes

## Map Unit Composition

## Major components

Wampee and similar soils: 51 percent
Blanton and similar soils: 38 percent

## Contrasting inclusions

Albany soils: 11 percent
Component Descriptions

## Wampee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Hills on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 12 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow

Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 12 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 6 inches; very dark gray fine sand
6 to 12 inches; dark grayish brown fine sand
Subsurface layer:
12 to 21 inches; brown fine sand that has yellowish brown mottles
21 to 32 inches; light brownish gray sand that has dark yellowish brown mottles
Subsoil:
32 to 55 inches; gray sandy clay loam that has white sand coatings and dark yellowish brown mottles
55 to 80 inches; light gray sandy clay loam that has white sand coatings and brown and brownish yellow mottles

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Hills on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 5 to 12 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Wetness; erosion

- Erosion-control measures are needed if pastures are renovated.
- Excess water should be removed, or species of grasses or legumes that are adapted to wet soil conditions should be grown.
Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."


## 77-Wampee-Blanton complex, 12 to 35 percent slopes

## Map Unit Composition

## Major components

Wampee and similar soils: 65 percent
Blanton and similar soils: 30 percent

## Contrasting inclusions

Albany soils: 5 percent

## Component Descriptions

## Wampee

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Hills on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 12 to 35 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: About 12 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 6s
Surface layer:
0 to 6 inches; very dark gray fine sand
6 to 12 inches; dark grayish brown fine sand
Subsurface layer:
12 to 21 inches; brown fine sand that has yellowish brown mottles
21 to 32 inches; light brownish gray sand that has dark yellowish brown mottles
Subsoil:
32 to 55 inches; gray sandy clay loam that has white sand coatings and dark yellowish brown mottles
55 to 80 inches; light gray sandy clay loam that has white sand coatings and brown and brownish yellow mottles

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge Landform: Hills on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 12 to 35 percent

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 6s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

Cropland

- This map unit is not suited for use as cropland.


## Pastureland

Management concerns: Slope; erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 79-Blanton fine sand, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 87 percent

## Contrasting inclusions

Albany soils: 10 percent
Alpin soils: 3 percent

## Component Descriptions

Blanton<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Landform: Ridges on marine terraces<br>Parent material: Sandy and loamy marine sediments<br>Slope: 0 to 5 percent<br>Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Use and Management

Cropland
Management concerns: Leaching of nutrients and pesticides; erosion

- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.
- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 80-Bonneau fine sand, 0 to 5 percent slopes

## Map Unit Composition

## Major components

Bonneau and similar soils: 80 percent
Contrasting inclusions
Albany soils: 10 percent
Blanton soils: 10 percent

## Component Descriptions

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4—Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2s
Surface layer:
0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping 15 to 27 inches; brownish yellow fine sand

Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam 74 to 80 inches; mottled gray and pink sandy clay loam

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.

Pastureland
Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 81-Blanton-Bonneau-Ichetucknee complex, 2 to 5 percent slopes

## Map Unit Composition

## Major components

Blanton and similar soils: 40 percent

Bonneau and similar soils: 30 percent Ichetucknee and similar soils: 20 percent

Contrasting inclusions
Alpin soils: 5 percent
Troup soils: 5 percent

## Component Descriptions

## Blanton

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Sandy and loamy marine sediments
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Slowest permeability: Moderately slow
Available water capacity: Very low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 72 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 3s
Surface layer:
0 to 5 inches; dark gray fine sand
Subsurface layer:
5 to 13 inches; light olive brown fine sand
13 to 27 inches; light yellowish brown fine sand
27 to 36 inches; pale yellow fine sand
36 to 41 inches; light gray fine sand
Subsoil:
41 to 48 inches; pale brown sandy loam that has light brownish gray mottles
48 to 67 inches; mottled yellowish red, yellowish brown, and light brownish gray sandy clay loam
67 to 74 inches; gray sandy clay loam that has yellowish brown and light olive brown mottles
74 to 80 inches; gray sandy clay loam that has red mottles

## Bonneau

Major Land Resource Area: 138—North-Central Florida Ridge
Landform: Knolls on marine terraces
Parent material: Marine sediments
Slope: 2 to 5 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Slowest permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Ponding: None
Depth to seasonal water saturation: 42 to 60 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 2 s

## Surface layer:

0 to 7 inches; grayish brown fine sand
Subsurface layer:
7 to 15 inches; yellowish brown fine sand that has light yellowish brown stripping
15 to 27 inches; brownish yellow fine sand
Subsoil:
27 to 36 inches; yellowish brown fine sandy loam
36 to 58 inches; mottled grayish brown, yellowish red, very pale brown, pale brown, and strong brown sandy clay loam
58 to 74 inches; mottled grayish brown, gray, and very pale brown sandy clay loam
74 to 80 inches; mottled gray and pink sandy clay loam

## Ichetucknee

Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Knolls on karst marine terraces
Parent material: Sandy and clayey marine deposits over limestone
Slope: 2 to 5 percent
Depth to restrictive feature: 40 to 60 inches to limestone bedrock
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow
Available water capacity: Moderate
Shrink-swell potential: Moderate
Flooding: None
Ponding: None
Depth to seasonal water saturation: 18 to 36 inches
Ecological community: 4-Longleaf Pine-Turkey Oak Hills
Nonirrigated land capability classification: 4e
Surface layer:
0 to 5 inches; gray fine sand
Subsurface layer:
5 to 13 inches; light gray fine sand
Subsoil:
13 to 39 inches; pale brown clay that has gray, brownish yellow, and red mottles 39 to 55 inches; yellowish red clay

Substratum:
55 to 80 inches; very pale brown, soft and hard limestone

## Use and Management

## Cropland

Management concerns: Erosion; leaching of nutrients and pesticides

- Grassed waterways can be used in some areas to slow and direct the movement of water and to reduce the hazard of erosion.
- Using a system of conservation tillage and planting cover crops reduce the runoff rate and the hazard of erosion.
- Maintaining a vegetative cover and establishing windbreaks reduce the hazard of wind erosion.
- Careful selection and application of chemicals and fertilizers can minimize contamination of ground water.


## Pastureland

Management concerns: Erosion

- Erosion-control measures are needed if pastures are renovated.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## 83-Urban land

This map unit consists of areas that are more than 85 percent covered by buildings, streets, industrial complexes, or pavement. Open areas include lawns, gardens, and playgrounds. Most areas of this map unit are in the phosphate mining region. Urban land cannot be recognized as natural soil because most areas have been either filled or excavated. Individual areas range from 5 to 80 acres in size.

This map unit is not suited to cultivated crops, pasture, or woodland. It is not rated as a site for septic tank absorption fields or dwellings without basements. Onsite evaluation is needed to determine suitability for these uses. This map unit has not been assigned a capability subclass or a woodland suitability group.

## 86-Aquents, frequently flooded

## Map Unit Composition

## Major components

Aquents and similar soils: 95 percent

## Contrasting inclusions

Fluvaquents: 3 percent
Leon soils: 2 percent

## Component Descriptions

Aquents
Major Land Resource Area: 138-North-Central Florida Ridge
Landform: Depressions on flood plains on marine terraces
Parent material: Fluvial sediments
Slope: 0 to 2 percent
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained and very poorly drained
Slowest permeability: Not rated
Available water capacity: Not rated
Shrink-swell potential: Not rated
Flooding: Frequent
Ponding: Frequent
Depth to seasonal water saturation: 0 to 12 inches
Ecological community: 7-North Florida Flatwoods
Nonirrigated land capability classification: 7w
Surface layer:
0 to 4 inches; black sand
Subsurface layer:
4 to 10 inches; light brownish gray fine sand
Subsoil:
10 to 17 inches; dark brown fine sand
17 to 24 inches; grayish brown fine sand
24 to 44 inches; light gray fine sand
44 to 63 inches; light brownish gray fine sand
63 to 80 inches; pale brown fine sand

## Use and Management

## Cropland

- This map unit is not suited for use as cropland.

Pastureland

- This map unit is not suited for use as pastureland.

Information regarding forestland, building site development, sanitary facilities, and local roads and streets can be found in the tables and in the section "Use and Management of the Soils."

## Use and Management of the Soils

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

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

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

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

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, 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.

According to the Suwannee County Extension Service and the "Florida Statistical Abstract" (Machen and others, 2004), in 2002 about 96,247 acres in Suwannee County was used for crops and pasture. The acreage included improved pasture; field crops, mainly corn, peanuts, tobacco, sorghum, wheat, oats, peanuts, soybeans, peas, and hay; and specialty crops, such as sweet corn, field peas, grapes, and pecans.

In Suwannee County, the potential of the soils for increased food production is fair. About 1,000 acres of potentially good cropland is now forestland, and about 400 acres is pasture. These areas could be used as cropland but would need intensive conservation measures to control soil blowing on the sandy soils and to control the fluctuating water table. In addition to the reserve capacity represented by these areas, food production could be increased considerably by extending the latest technology to all of the cropland in the county.

Soil erosion is a problem on about one-fourth of the cropland and pasture in the county. In areas where the slope is more than 2 percent, erosion is a hazard-especially in areas of the moderately well drained Blanton, Bonneau, Chiefland, Eunola, Foxworth, and Padlock soils and the somewhat poorly drained Albany, Chipley, Falmouth, Hurricane, Lynchburg, and Ocilla 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. On livestock farms, which require pasture and hay, including grasses and legumes in the cropping system helps to control erosion in the sloping areas and improves tilth for the crops that follow in the rotation. The legumes also increase nitrogen levels in 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 method of planting corn and soybeans reduces the hazard of erosion in sloping areas and is suitable on most of the soils in the county.

Contour tillage and terraces are not practical on most of the soils in the county because of the sandy textures and the short, irregular slopes. Stripcropping and diversions can help to control runoff and reduce the hazard of erosion. They are most practical on deep, well drained soils that have a uniform slope. Diversions and sod
waterways can also help to control runoff and reduce the hazard of erosion. They can be used on many of the soils in the county.

Wind erosion is a major hazard on the sandy soils in the county. Strong winds can damage soils and tender crops in a few hours in open, unprotected areas where the soil is dry and bare. Maintaining a vegetative cover and surface mulch minimize wind erosion. Wind erosion is damaging for several reasons. It reduces soil fertility by removing finer soil particles and organic matter; damages or destroys crops by sandblasting; spreads diseases, insects, and weed seeds; and creates health hazards and cleaning problems. Control of wind erosion minimizes dust storms and improves the quality of air, resulting in healthier living conditions.

Field windbreaks of adapted trees and shrubs, such as Carolina laurelcherry, sand pine, slash pine, southern redcedar, and Japanese privet, and strip crops of small grains help to minimize wind erosion and crop damage. Field windbreaks and strip crops are narrow plantings made at right angles to the prevailing wind. The interval depends on the erodibility of the soil and the susceptibility of crops to damage from sandblasting.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition. Additional information on planting windbreaks and screens and on planting and caring for trees and shrubs can be obtained from local office of the National Resources Conservation Service or the Cooperative Extension Service or from a nursery. Information regarding erosion-control practices for each kind of soil is available at the local office of the Natural Resources Conservation Service.

Soil drainage is a major management concern affecting about 10 percent of the acreage used for crops and pasture in the county. The poorly drained Sapelo soils and the very poorly drained Cantey, Pamlico, Pantego, and Surrency soils are naturally so wet that the production of the crops common to the area is generally not practical.

Unless artificially drained, some of the somewhat poorly drained soils are wet enough in the root zone to cause damage to most crops during most years. An example is the Albany soils. Also, unless artificially drained, some of the poorly drained Sapelo soils are wet enough to cause some damage to pasture plants. These soils also have a low available water capacity and are droughty during dry periods. Subsurface irrigation is required for adequate production of pasture plants in areas of these soils.

The very poorly drained Cantey, Pamlico, and Surrency soils are very wet during rainy periods and have water standing on the surface in most areas. The production of good quality pasture on these soils is not possible without artificial drainage. A combination of surface drainage and irrigation is needed for intensive pasture production on these soils. Information regarding drainage and irrigation for each kind of soil is available at the local office of the Natural Resources Conservation Service.

Fertility is naturally low in most of the soils in the county. Most of the soils have a sandy surface layer and are light colored. Many of the soils have a loamy subsoil. Examples are Albany, Eunola, Otela, and Blanton soils.

Chiefland, Ichetucknee, and Otela soils have an acid surface layer and are underlain by calcareous limestone that is slightly alkaline or moderately alkaline. Most of the soils in the county have a surface layer that is strongly acid or very strongly acid and require applications of ground limestone to raise the pH level sufficiently for good crop growth. Nitrogen, potassium, and available phosphorus 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 the crop, 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 easily cultivated with common tillage equipment and provide a good seedbed.

Most of the soils in the county have a surface layer of sand or loamy fine sand that is light in color and that has a low to moderate content of organic matter. Pamlico soils are an exception. They are organic soils.

Generally, the structure of the surface layer of most of the soils in the county is weak. When soils that are dry and that have a low content of organic matter receive intense rainfall, colloidal matter cements and forms a slight crust, particularly if a plowpan is present. The crust is slightly hard when dry and is slightly impervious to water. Once the crust forms, it reduces infiltration and increases runoff. Regular additions of crop residue, manure, and other organic material improve soil structure and minimize crust formation.

Fall plowing is generally not advisable in Suwannee County. Sloping soils, which make up about one-fourth of the cropland in the county, are subject to erosion if plowed in the fall. Gullies caused by erosion are common on unprotected soils.

About three-fourths of the cropland in the county is sandy and is subject to soil blowing. Tons of soils are lost each year in the county as result of wind erosion during the spring plowing season.

Field crops grown in the county include corn, soybeans, peanuts, and tobacco. The acreage of grain sorghum could be increased if economic conditions were favorable. Rye and wheat are the common close-growing crops. Oats can also be grown.

Watermelons are the major specialty crop grown commercially in the county. A small acreage is used for squash, blueberries, grapes, pecans, and field peas. If economic conditions were favorable, the acreage of blueberries, nursery sod, cabbage, turnips, collards, and mustard greens could be increased.

Deep soils that have good natural drainage are especially well suited to many vegetables and small fruits. If irrigated, about 90,000 acres of the Blanton, Alpin, and Bonneau soils that have slopes of less than 8 percent would be very well suited to vegetables and small fruits. Also, if adequately drained, Albany soils would be very well suited to vegetables and small fruits.

Information and suggestions about specialty crops can be obtained from the local offices of the Cooperative Extension Service and the Natural Resources Conservation Service.

Differences in pasture yields are closely related to differences in soils. Management of pasture is based on the interrelationship of soils, plants, lime, fertilizer, and moisture. Pasture in the county is used to produce forage for beef and dairy cattle. Bahiagrass and improved bermudagrass are the major pasture plants grown in the county. Seeds can be harvested from bahiagrass for improved pasture plantings and for commercial purposes. Many cattle producers seed small grains on cropland and overseed rye in pastures in the fall for grazing in winter and spring. In pastures of bermudagrass, excess grass is harvested as hay during the summer for feeding during the winter. Also, hay is made from harvested peanuts during the fall for feeding during the winter.

The well drained and moderately well drained Blanton, Otela, Pedro Variant, Troup, and Wampee soils are well suited to bahiagrass and improved bermudagrass. If a good management system is applied, hairy indigo and alyce clover can be grown during the summer and the fall.

The somewhat poorly drained Albany, Chipley, Hurricane, Ichetucknee, and Lynchburg soils are well suited to bahiagrass and to improved bermudagrass if
legumes, such as sweetclover, are also grown and if adequate amounts of lime and fertilizer are applied.

If drained where needed, the Plummer, Pottsburg, and Sapelo soils are well suited to bahiagrass. Subsurface irrigation increases the length of the growing season and the total production of forage. If adequate amounts of lime and fertilizer are applied, these soils are also well suited to legumes, such as white clover.

Pastures in many parts of the county have been greatly depleted by continuous excessive grazing. Pasture yields can be increased by irrigation, by applications of fertilizer and lime, and by growing legumes.

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

## 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 4. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of each map unit is also shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also 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.

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 table are grown in the county, 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, and for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are used in this survey.

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

Class 1 soils have few limitations that restrict their use.
Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate
conservation practices.
Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

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

Class 5 soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation.

Class 7 soils have very severe limitations that make them unsuitable for cultivation.
Class 8 soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

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

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

## Ecological Communities

Gregory R. Brannon, soil data quality specialist, and Robert Weatherspoon, soil scientist, Natural Resources Conservation Service, helped to prepare this section.

Twenty-six ecological communities are recognized in Florida (USDA-SCS, 1985). Of these 26 communities, 4 are prevalent in Suwannee County.

## Longleaf Pine-Turkey Oak Hills (4)

The Longleaf Pine-Turkey Oak Hills ecological community is dominated by longleaf pine and by turkey oak, bluejack oak, and sand post oak. Common shrubs include Adam's needle, coontie, coralbean, shining sumac, and yaupon. Pricklypear cactus, partridge pea, blazingstar, elephantsfoot, wiregrass, grassleafed goldaster, yellow Indiangrass, and dropseed are common. The map units that support the Longleaf Pine-Turkey Oak Hills ecological community in Suwannee County are:
2 Ocilla-Albany-Blanton complex, 0 to 5 percent slopes
4 Blanton fine sand, 5 to 8 percent slopes
5 Blanton-Bonneau complex, 0 to 5 percent slopes
10 Blanton-Alpin complex, 0 to 5 percent slopes, occasionally flooded
11 Bonneau-Blanton-Padlock complex, 0 to 5 percent slopes
12 Blanton-Chiefland-Ichetucknee complex, 5 to 8 percent slopes
14 Blanton-Bonneau complex, 5 to 8 percent slopes

81 Blanton-Bonneau-Ichetucknee complex, 2 to 5 percent slopes

## North Florida Flatwoods (7)

The North Florida Flatwoods ecological community is normally dominated by slash pine and by live oak and sand live oak on the slightly higher ridges and an understory of saw palmetto, gallberry, and grasses. Scattered pond pine, water oak, laurel oak, sweetgum, wax-myrtle, and several species of blueberry are also common. Chalky bluestem, broomsedge bluestem, lopsided Indiangrass, low panicums, switchgrass, and wiregrass are the common grasses. Other common plants include grassleafed goldaster, blackberry, brackenfern, deertongue, gayfeather, milkworts, and a variety of seed producing legumes. The map units that support the North Florida Flatwoods ecological community in Suwannee County are:
32 Leon fine sand
35 Mascotte-Sapelo complex
39 Sapelo-Mascotte-Albany complex, frequently flooded
46 Pamlico-Olustee-Pottsburg complex, depressional
49 Sapelo-Mascotte-Plummer complex
51 Plummer fine sand
52 Plummer fine sand, depressional
54 Plummer muck, depressional
68 Mascotte and Plummer soils, occasionally flooded
86 Aquents, frequently flooded

## Upland Hardwood Hammocks (11)

The Upland Hardwood Hammocks ecological community is normally dominated by black cherry, eastern hornbeam, flowering dogwood, hawthorns, laurel oak, laurelcherry, live oak, loblolly pine, longleaf pine, slash pine, pignut hickory, southern magnolia, sweetgum, and water oak and an understory of American beautyberry, arrowwood, sparkleberry, and wax-myrtle. Low panicums, wood oats, bluestem, and switchgrass are common grasses. Other common plants include aster, cat greenbrier, common greenbrier, crossvine, partridge pea, poison ivy, ragweed, Spanish moss, Virginia creeper, wild grape, yellow jessamine, dotted horsemint, and blackberry. The map units that support the Upland Hardwood Hammocks ecological community in Suwannee County are:

7 Bigbee-Garcon-Meggett complex, occasionally flooded
13 Blanton-Alpin-Bonneau complex, 0 to 5 percent slopes
38 Alpin fine sand, 0 to 5 percent slopes, occasionally flooded
43 Blanton-Foxworth-Alpin complex, 0 to 5 percent slopes
69 Osier-Bibb-Albany complex, frequently flooded
72 Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded
73 Boulogne-Chipley-Hurricane complex, 0 to 5 percent slopes

## Swamp Hardwoods (21)

The Swamp Hardwoods ecological community is normally dominated by bald cypress, blackgum, red maple, sweetbay, and water ash. Other common plants are buttonbush, dahoon holly, cinnamon fern, lizard's tail, and royal fern. The map units that support the Swamp Hardwoods ecological community in Suwannee County are:

25 Pantego fine sandy loam
41 Fluvaquents-Meggett-Bigbee complex, frequently flooded
47 Clara and Meadowbrook soils, frequently flooded
65 Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded
74 Surrency, Plummer, and Cantey soils, frequently flooded

## Forestland Productivity and Management

Silviculture is the primary agricultural activity in Suwannee County. Approximately 231,500 acres, or 53 percent of the county, is forestland. Of this total, about 6 percent is owned or managed by the forest industry, 12 percent is owned by private corporations, 80 percent is owned by private landowners, and 2 percent is held by the county, State, or Federal government.

About 115,750 acres, or 50 percent of the forestland in the county, is longleaf-slash pine forest type. Slash pine is the dominant species. Loblolly pine and upland hardwoods make up about 26 percent of the forestland in the county, and oak, gum, and cypress make up the remaining 24 percent.

Pulpwood, sawlogs, poles, and veneers are the major forest products in the county. Markets for wood products are plentiful. Pulp and paper mills are the primary outlets. In addition to the economic benefits derived from forestland, multiple-use benefits, such as recreation, aesthetics, and soil protection, are of primary importance. Timber management varies from intensive clearcutting, site preparation, and planting to less intensive, natural regeneration. In recent years, reforestation efforts have increased considerably on cultivated private lands due in large part to government incentives to take highly erodible lands out of farm production.

Tables 5, 6, 7, and 8 can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forest management.

## Forestland Productivity

In table 5, the potential productivity of merchantable or common trees on a soil is expressed as a site index and as a volume number. The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site
index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (USDA-NRCS, 1988).

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 meters per hectare 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.

Suggested trees to plant 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

Table 5 can be used by forestland owners or forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed. The table lists the ordination symbol for each soil. Soils assigned the same ordination symbol require the same general management and have about the same potential productivity.

The first part of the ordination symbol, a number, indicates the potential productivity of the soils for an indicator tree species. The number indicates the volume, in cubic meters per hectare per year, which the indicator species can produce in a pure stand under natural conditions. The number 1 indicates low potential productivity; 2 or 3 , moderate; 4 or 5 , moderately high; 6 to 8 , high; 9 to 11 , very high; and 12 to 39 , extremely high. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter $R$ indicates steep slopes; $X$, stoniness or rockiness; $W$, excess water in or on the soil; $T$, toxic substances in the soil; $D$, restricted rooting depth; $C$, clay in the upper part of the soil; $S$, sandy texture; $F$, a high content of rock fragments in the soil; $L$, low strength; and $N$, snowpack. The letter $A$ indicates that limitations or restrictions are insignificant. If a soil has more than one limitation, the priority is as follows: R, X, W, T, D, C, S, F, L, and N.

In the table, slight, moderate, and severe indicate the degree of the major soil limitations to be considered in management.

Erosion hazard is the probability that damage will occur as a result of site preparation and cutting where the soil is exposed along roads, skid trails, and fire lanes and in log-handling areas. Forests that have been burned or overgrazed are also subject to erosion. Ratings of the erosion hazard are based on the percent of the slope. A rating of slight indicates that no particular prevention measures are needed under ordinary conditions. A rating of moderate indicates that erosion-control measures are needed in certain silvicultural activities. A rating of severe indicates that special precautions are needed to control erosion in most silvicultural activities.

Equipment limitation reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in forestland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of slight indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of moderate indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of severe indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

Seedling mortality refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions.

The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of slight indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of moderate indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of severe indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

Windthrow hazard is the likelihood that trees will be uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or other limiting layers. A rating of slight indicates that under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of moderate indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of severe indicates that many trees can be blown down during these periods.

Plant competition ratings indicate the degree to which undesirable species are expected to invade and grow when openings are made in the tree canopy. The main factors that affect plant competition are depth to the water table and the available water capacity. A rating of slight indicates that competition from undesirable plants is not likely to prevent natural regeneration or suppress the more desirable species. Planted seedlings can become established without undue competition. A rating of moderate indicates that competition may delay the establishment of desirable species. Competition may hamper stand development, but it will not prevent the eventual development of fully stocked stands. A rating of severe indicates that competition can be expected to prevent regeneration unless precautionary measures are applied.

Interpretive ratings for various aspects of forest management are also given in tables 6,7 , and 8 . The ratings are both verbal and numerical.

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

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

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (USDANRCS, 1998).

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.

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.

For limitations affecting construction of haul roads and log landings, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of slight indicates that no significant limitations affect construction activities, moderate indicates that one or more limitations can cause some difficulty in construction, and severe indicates that one or more limitations can make construction very difficult or very costly.

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

Ratings in the column soil rutting hazard are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of slight indicates that the soil is subject to little or no rutting, moderate indicates that rutting is likely, and severe indicates that ruts form readily.

## Recreation

The soils of the survey area are rated in tables 9 and 10 according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

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

The information in tables 9 and 10 can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large
stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## Wildlife Habitat

Wildlife is a valuable resource in Suwannee County. Fishing and hunting are popular, year-round sports. Large areas of wetlands and upland soils provide a wide diversity of habitat. Primary game species include white-tailed deer, squirrels, turkey, bobwhite quail, feral hogs, and waterfowl. Nongame species include raccoon, rabbit, armadillo, opossum, skunk, bobcat, gray fox, red fox, otter, and a variety of songbirds, wading birds, woodpeckers, predatory birds, reptiles, and amphibians. Because almost all of the county is rural, the interspersed farmland and forestland provide generally good wildlife habitat throughout the county. Some of the more important areas of habitat are the flood plains along the Suwannee River, which forms the western and southern boundaries of the county, and along the Withlacoochee River, which forms the northwestern boundary. The State of Florida maintains a wildlife management area that provides valuable wildlife habitat in the western part of the county.

Small phosphate mining operations in the southwestern part of the county greatly affect fish and wildlife habitats. When an area is being actively mined, fish and wildlife habitat disappears temporarily. Afterwards, however, the areas are reclaimed to a mixture of forests, ponds, and wetlands that provide quality habitat for a variety of species.

Several small lakes-mostly less than 30 acres-are in the county. Lake Louise, which is 104 acres, is the only lake larger than 100 acres. Good fishing is found
throughout the county. Game and nongame species include largemouth bass, channel catfish, bullhead catfish, bluegill, redear, spotted sunfish, warmouth, black crappie, chain pickerel, gar, bowfin, and sucker.

A number of endangered and threatened species are in Suwannee County. These range from the seldom seen red-cockaded woodpecker to the more commonly seen southeastern kestrel. A detailed list of these species and information on range and habitat needs are available from the district conservationist at the local office of the Natural Resources Conservation Service.

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

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

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

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

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

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

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

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

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

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are 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, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for 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, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

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

## Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed.

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

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

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are
described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 1998) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1998).

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

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1998).

25 Pantego fine sandy loam
41 Fluvaquents-Meggett-Bigbee complex, frequently flooded
46
47 Clara and Meadowbrook soils, frequently flooded
49 Sapelo-Mascotte-Plummer complex
52 Plummer fine sand, depressional
54 Plummer muck, depressional
68 Mascotte and Plummer soils, occasionally flooded
74 Surrency, Plummer, and Cantey soils, frequently flooded
86 Aquents, frequently flooded
Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

7 Bigbee-Garcon-Meggett complex, occasionally flooded
69 Osier-Bibb-Albany complex, frequently flooded
72 Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded

## 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, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

## Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 12 and 13 show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

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

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

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

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

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

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

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings.

The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

## Sanitary Facilities

Tables 14 and 15 show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

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

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches,
if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

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

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 or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If 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 or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

## Construction Materials

Tables 16 and 17 give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

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 table 16, 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.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

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

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

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).

## Water Management

Table 18 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the 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).

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

Data relating to soil properties are collected during the course of the soil survey.
Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many 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. These results are reported in table 24.

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 19 through 23. They include engineering properties, physical and chemical properties, and pertinent soil and water features.

## Engineering Properties

Table 19 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

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

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

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

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

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

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

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

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

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

## Physical Soil Properties

Table 20 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.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrinkswell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $1 / 3$ - or $1 / 10-\mathrm{bar}(33 \mathrm{kPa}$ 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.

Permeability ( $K_{\text {sat }}$ ) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity ( $\mathrm{K}_{\text {sat }}$ ). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $1 / 3$ - or $1 / 10$-bar tension ( 33 kPa or 10 kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3 , shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

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

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

Erosion factors are shown in the table as the K factor ( Kw and Kf ) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69 . Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor $K f$ 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 on the Internet (USDA-NRCS, no date).

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

## Chemical Soil Properties

Table 21 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.
Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality ( pH 7.0 ) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

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. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C . Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium $(\mathrm{Ca})$ and magnesium $(\mathrm{Mg})$ in the water extract from saturated soil paste. It
is the ratio of the Na concentration divided by the square root of one-half of the $\mathrm{Ca}+$ Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

## Soil Features

Table 22 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, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

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

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

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

## Water Features

Table 23 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 23 indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 23 indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

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

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

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

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

## Physical, Chemical, and Mineralogical Analyses of Selected Soils

By Ellis Benham and Robert Weatherspoon, Natural Resources Conservation Service
Physical, chemical, and mineralogical properties of representative pedons sampled in Suwannee County are presented in tables 24, 25, and 26. The analyses were conducted by the Soil Survey Laboratory at the National Soil Survey Center of the Natural Resources Conservation Service in Lincoln, Nebraska. Detailed descriptions of these pedons are given in the section "Soil Series and Their Morphology." Additional characterization data for these pedons are available online (http://ssldata.nrcs.usda.gov/).

Typical pedons were sampled from pits at carefully chosen locations. Samples were air-dried, crushed by hand with a rubber roller, and passed through a 2-millimeter screen. The methods of sample preparation and analysis are detailed in "Soil Survey Investigations Report No. 42" (USDA-NRCS, 2004). Additional information that is useful for interpreting the data can be obtained from "Soil Survey Investigations Report No. 45" (USDA-NRCS, 1995).

## Physical Analyses

Data from physical analyses of selected soils are shown in table 24.
Most of the soils sampled in Suwannee County for laboratory analyses are inherently very sandy; however, some of the pedons have an argillic horizon in the upper and lower parts of the solum. All of the soils sampled, except for Falmouth fine sand and Padlock fine sand, have three or more horizons in which the total content of sand is more than 85 percent. The Alpin and Foxworth soils have more than 92 percent sand to a depth of 2 meters or more.

Particle-size distribution was determined by pipette. The method is described by method code 3A1a1a in "Soil Survey Investigations Report No. 42" (USDA-NRCS, 2004). The percentages of particles in the 0.1 - to 75 -millimeter fraction was determined by sieving and field estimates (method 3A2).

Water retention and bulk density at 33 kPa and lower tensions were determined from saran coated clods (methods 3C1c2 and 3B1b, respectively). Water retention at
all tensions greater than 33 kPa was determined from samples smaller than 2 millimeters on ceramic pressure plates (method 3C2a1a). The coefficient of linear extensibility (COLE) was calculated from bulk density data by method 3D4a. Water retention difference (WRD) was calculated from the previously mentioned water retention data by method 3D5a.

The content of clay in the soils ranges from less than 1.9 percent in the Alpin and Foxworth soils to 51.8 percent in the Falmouth soil. The content of clay in the deeper argillic horizons in the Albany, Blanton, and Sapelo soils ranges from 17.0 to 30.5 percent. The content of clay in the argillic horizons in the Falmouth and Padlock soils ranges from 47.3 percent in Padlock fine sand to 51.8 percent in Falmouth fine sand.

The content of silt ranges from 1.3 percent in one horizon of Blanton fine sand to 6.5 percent in one horizon of Albany fine sand. All horizons in the Alpin and Foxworth soils are 5.9 percent silt or less. All horizons in the Falmouth and Padlock soils are 4.0 percent silt or more.

Fine sand dominates the sand fractions in most of the soils. The upper sandy horizons of the Falmouth and Padlock soils, however, are dominated by fine sand, medium sand, or both. All horizons of the Alpin and Foxworth soils are dominated by fine sand, medium sand, or both. The Albany, Blanton, and Sapelo soils are dominated by fine sand, very fine sand, or both. The content of very fine sand is 15.7 percent or less in the Alpin and Foxworth soils and 12.8 percent or less in the Falmouth and Padlock soils. The content of coarse sand is 2.3 percent or less in the Falmouth and Padlock soils and 3.9 percent or less in all horizons of the Albany, Blanton, and Sapelo soils. The content of very coarse sand is 1.0 percent or less in all horizons of the selected soils.

The sandy soils in Suwannee County rapidly become droughty during periods of low precipitation when rainfall is widely scattered. Conversely, they are rapidly saturated during periods of heavy rainfall. Soils that have inherently poor drainage, such as Sapelo soils, can remain saturated for long periods because the seasonal high water table is close to the surface.

Hydraulic conductivity exceeds 40 centimeters per hour throughout the profile in the Alpin and Foxworth soils. It is 40 centimeters per hour or more in one or more horizons in the Albany, Blanton, and Sapelo soils. It is 0.5 to 5.0 centimeters per hour in the argillic horizon in the Albany and Blanton soils. It is 2.0 to 5.0 centimeters per hour in the argillic horizon in the Sapelo soils. It is about 0.2 centimeters per hour or less in one or more argillic horizons in the Falmouth and Padlock soils. Low hydraulic conductivity at a shallow depth can affect the design and function of septic tank absorption fields.

Particles in the 0.1- to 75-millimeter fraction are coarser than very fine sand and not larger than gravel (up to 3 inches). These particles provide physical support for plant roots but provide very little water or nutrients. The selected soils have high amounts of this "inert" fraction, with the Foxworth soil having values of 80 percent or higher in all horizons. The lowest values are in the clayey horizons of the Falmouth soil.

Bulk density tends to increase with increasing depth and with increasing content of sand. Organic matter has a low bulk density, so increasing the content of organic matter tends to reduce the bulk density. Bulk density for sandy horizons in the selected soils typically ranges from 1.45 to $1.7 \mathrm{~g} / \mathrm{cc}$. Bulk density in the clayey horizons typically ranges from 1.0 to $1.4 \mathrm{~g} / \mathrm{cc}$.

Gravimetric water content is listed for 33 kPa ( $1 / 3$-bar) and $1,500 \mathrm{kPa}$ ( 15 -bar) tensions. The 33 kPa water content is typically assumed to be the water content at field capacity. The $1,500 \mathrm{kPa}$ water content represents tightly held water that is unavailable to most field crops. The values at both 33 kPa and $1,500 \mathrm{kPa}$ tend to increase with increasing amounts of clay and organic matter. The difference
between these two values is assumed to be the value for the water that is available to plants. It is listed in the Water Retention Difference (WRD) column of table 24. The WRD values are the calculated water supplying capability of the horizons and are reported as centimeters of water per centimeter of horizon thickness. Values for sandy materials are typically less than $0.05 \mathrm{~cm} / \mathrm{cm}$. Clayey materials may range to more than $0.25 \mathrm{~cm} / \mathrm{cm}$.

Coefficient of Linear Extensibility (COLE) is a measure of the tendency of soil material to shrink and swell as it dries and is wetted. COLE for sandy materials is typically very low, 0.005 or less. COLE increases with increasing content of clay and with increasing content of smectitic clay. The highest values ( 0.2 or higher) observed in the selected soils are in the lower horizons of the Falmouth soil.

## Chemical Analyses

Data from chemical analyses of selected soils are in table 25 .
Values for extractable bases, sum of bases, and cation exchange capacity at pH 7 were determined by extraction with 1 N ammonium acetate using method 4B1a1b1a1 as described in "Soil Survey Investigations Report No. 42" (USDA-NRCS, 2004). Values for extractable aluminum were determined by extraction with 1 N potassium chloride (method 4B3a1a1a1). Effective cation exchange capacity was determined by summing extractable bases and extractable aluminum (method 4B4b2a). Base saturation was calculated by the sum of cations from the bases extracted with ammonium acetate (method 4 B 4 c 4 a ). The pH was measured with a glass electrode, using a soil to water ratio of 1:1 (method 4C1a2a1a1). Values for extractable acidity were determined by extraction with Barium chloride-ethanolamine (method 4B2b1a1a1). Values for extractable phosphorous were determined by the Bray I procedure (method 4D3a1a1). Aluminum saturation was calculated from extractable aluminum and ECEC (method 4B4d1a). An approximation of organic carbon was calculated by subtracting carbonate carbon from total carbon (methods 4E1a1a1a1 and 4H2a1a1, respectively).

The soils in Suwannee County have a low content of extractable bases. All of the soils that were sampled have one or more horizons with less than 1 milliequivalent of extractable bases per hundred grams of soil. The Albany, Blanton, Falmouth, Padlock and Sapelo soils have one or more horizons with more than 1 milliequivalent per hundred grams to a depth of 2 meters or more. The Falmouth soils have one horizon with more than 10 milliequivalents per hundred grams. The relatively mild, humid climate of Suwannee County results in a rapid depletion of basic cations (calcium, magnesium, sodium, and potassium) through leaching.

Calcium is the dominant base in most of the soils that were sampled. Levels of magnesium, however, are higher than those of calcium in one or more horizons in the Alpin, Blanton, and Foxworth soils. The Alpin and Foxworth soils contain less than 0.30 milliequivalents of extractable calcium per hundred grams of soil throughout and contain 0.15 or less milliequivalents of extractable magnesium per hundred grams of soil. The combined content of extractable calcium and magnesium is typically not more than 0.50 milliequivalents per hundred grams in the surface soil, except where lime has been applied. The A or Ap horizon in the Albany, Blanton, Falmouth, Padlock, and Sapelo soils contains more than 0.50 milliequivalents of extractable calcium and magnesium per hundred grams of soil. The content of sodium is less than 0.50 milliequivalents per hundred grams of soil. The content of extractable potassium generally is 0.15 milliequivalents or less per hundred grams of soil. The Falmouth and Padlock soils have one or more horizons with more than 0.4 milliequivalents of extractable potassium per hundred grams of soil.

Values for cation-exchange capacity at pH 7 (CEC-7) are an indication of plantnutrient supplying capacity. They are less than 10 milliequivalents per hundred
grams in the surface layer of all the soils and are greater than 10 milliequivalents per hundred grams in the argillic horizons of the Falmouth and Padlock soils. Enhanced cation-exchange capacities parallel the higher content of clay in the argillic horizon in the Falmouth and Padlock soils. These soils have a low cationexchange capacity in the surface layer and require only small amounts of lime or sulfur to significantly alter base status and soil reaction. Generally, soils that have low inherent fertility are associated with low values for extractable bases and low cation-exchange capacity. Fertile soils are associated with high values for extractable bases, high values for base saturation, and high cation-exchange capacity.

The effective cation exchange capacity (ECEC) is typically smaller than CEC-7. It is a measure of cation exchange capacity at the native pH of the soil, rather than at pH 7.

Base saturation represents the fraction of the soil exchange complex that is occupied by potential plant nutrients. Higher values are better for plant growth. For sandy soils that have very few exchange sites, the quantity of nutrients the soil can supply may be very low even though the base saturation is relatively high. The base saturation is low in one or more horizons (typically the sandier horizons) in most of the selected soils.

Reaction of the selected soils generally ranges from pH 4.6 to 6.9 in water and is generally about 0.2 to 1.0 pH unit lower in calcium chloride and potassium chloride. Maximum availability of nutrients for plants generally is attained when soil reaction is between pH 6.5 and 7.0; however, maintaining soil reaction above pH 6.5 in Florida is not economically feasible for most agricultural production purposes.

Soil morphology was used to determine the spodic horizons. Aluminum that is extractable with citrate-dithionite is in the Bt horizon of the Sapelo soil. The content of iron and aluminum in the soils in the county is insufficient to detrimentally affect phosphorus availability.

Extractable acidity typically increases with increased weathering. Commonly, organic matter supplies a significant percentage of the extractable acidity. Increasing amounts of clay in the selected soils equate to increasing numbers of exchange sites, commonly resulting in greater amounts of extractable acidity in this strongly weathering environment.

The content of phosphorous is relatively low in many of the selected soils. The soils have a higher content of phosphorous in the surface horizon, possibly because of the application of chemical fertilizer or manure. Phosphorous leaching is a danger if excessive amounts are applied to the sandy soils.

Aluminum saturation is a measure of the amount of the soil exchange complex occupied by aluminum. Aluminum is typically not considered a plant nutrient and is toxic to plant roots in higher concentrations. The degree to which aluminum is toxic depends on the plant species. A higher aluminum saturation suggests a greater possibility of aluminum toxicity unless liming or some other form of remediation is practiced. Aluminum saturation is relatively high in some horizons of many of the selected soils.

The estimated content of organic carbon is 1 percent or less in all horizons of the Albany, Alpin, and Foxworth soils. Of the selected soils, only the Falmouth soil has a horizon that contains more than 2 percent organic carbon. In most of the soils, the content of organic carbon decreases rapidly as depth increases. The content of organic carbon increases, however, in the Bh horizon of the Sapelo soils. Because nutrient- and water-holding capacities are directly related to the content of organic carbon in the surface soil of sandy soils, management practices that conserve organic carbon are highly desirable.

## Mineralogical Analyses

Data from mineralogical analyses of selected soils are in table 26.
The mineralogy of clay fractions was determined by x-ray diffraction using method 7A1a1 as described in "Soil Survey Investigations Report No. 42" (USDA-NRCS, 2004). The Soil Survey Laboratory reports results as peak-size classes, with class 1 peaks being the smallest and class 5 peaks being the largest. Peak size approximates the relative proportions of the clay mineral species. The Soil Survey Laboratory does not quantitatively determine clay mineral amounts by x ray.

Crystalline mineral components in the clay fraction of less than 0.002 millimeter are shown in table 26 for the major horizons of the selected soils. The clay mineralogical suite consists mostly of smectite, a 14-angstrom intergrade, kaolinite, and quartz. The smectite is present only in some horizons of the Alpin, Falmouth, and Padlock soils. The 14-angstrom intergrade mineral and kaolinite are present in all of the soils analyzed. Kaolinite is the dominant clay mineral in the Albany and Blanton soils. Gibbsite is present only in the Blanton soil and only in a small amount. Smectite dominates the clay fraction of the Alpin, Falmouth, and Padlock series.

The smectite is generally inherited from the sediments in which the soils formed. The stability of smectite is generally favored by high levels of pH in areas where the alkaline elements have not been leached by percolation of rainwater. Smectite can, however, be present in moderate amounts regardless of drainage or chemical conditions. The 14-angstrom intergrade, a mineral of uncertain origin, is widespread in Florida soils. Although it is present in a variety of soil environments, it tends to be more prevalent under moderately acidic, relatively well drained conditions.

The kaolinite is most likely inherited from the parent material, but some may have formed as a weathering product of other minerals. Kaolinite is relatively stable in the acidic environments of the soils in Suwannee County.

The clay-sized quartz has primarily resulted from weathering of the silt fraction.
Clay mineralogy can have a significant impact on soil properties, particularly for soils that have a high content of clay. Soils that contain smectitic clay have a higher capacity for retaining plant nutrients than soils dominated by kaolinite, the 14angstrom intergrade, or quartz. It is not unusual for the tiny amount of clay present in very sandy soils to be dominated by smectite. However, the use and management of the soils in the county is influenced less by the clay mineralogy than by the total content of clay.

Sand and silt mineralogy was determined by grain counts (method 7C1). The number of grains of each identified mineral species in a 300 grain sample was recorded, along with the percentage of grains that were minerals resistant to weathering in a humid, acidic environment. All of the soils that were analyzed had siliceous mineralogy. Quartz was the dominant mineral to the extent that the percentage of resistant grains matches the percentage of quartz. The sand and silt fraction of the analyzed soils ranged from 98 to 100 percent resistant minerals, indicating the soils contain no significant amount of weatherable minerals.

## Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 27 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 Alfisol.

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 Udalf (Ud, meaning humid, plus alf, from Alfisol).

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 Hapludalfs (Hapl, meaning minimal horizonation, plus udalf, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective Typic identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

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, superactive, hyperthermic, shallow Typic Hapludalfs.

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.

## Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for
each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Alaga Series<br>Major Land Resource Area: 138—North-Central Florida Ridge<br>Local physiographic area: Coastal Plain<br>Geomorphic setting: Uplands<br>Parent material: Sandy marine deposits<br>Drainage class: Somewhat excessively drained<br>Permeability class: Rapid<br>Soil depth class: Very deep<br>Shrink-swell potential: Low<br>Slope: 0 to 5 percent<br>Taxonomic classification: Thermic, coated Typic Quartzipsamments

## Associated Soils

The Alaga soils are commonly associated on the landscape with Alpin, Blanton, Chipley, Foxworth, and Troup soils.

- The Alpin soils have thin lamellae at a depth of 40 to 78 inches, have 5 to 10 percent silt plus clay in the particle-size control section, and are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Chipley soils are somewhat poorly drained.
- The Foxworth soils are moderately well drained.
- The Troup soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.


## Typical Pedon

Alaga loamy fine sand, 0 to 5 percent slopes; about 2.0 miles north of Florida Highway 6 and 0.38 mile east of secondary road 255; sec. 11, T. 1 N., R. 10 E.; Pinetta, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 30 minutes, 23 seconds north and long. 83 degrees, 17 minutes, 50 seconds west.

A1-0 to 4 inches; very dark grayish brown (10YR 3/2) loamy fine sand; weak fine granular structure; very friable; very strongly acid; gradual wavy boundary.
A2-4 to 9 inches; dark brown (10YR 3/3) loamy sand; weak fine granular structure; very friable; strongly acid; gradual wavy boundary.
C1-9 to 29 inches; brown (7.5YR 4/4) loamy sand; single grain; loose; very strongly acid; gradual wavy boundary.
C2-29 to 58 inches; strong brown (7.5YR 5/6) loamy sand; single grain; loose; very strongly acid; gradual wavy boundary.
C3-58 to 72 inches; reddish yellow (7.5YR 6/8) sand; single grain; loose; very strongly acid; gradual wavy boundary.
C4—72 to 80 inches; brownish yellow (10YR 6/6) sand; single grain; loose; very strongly acid.

## Range in Characteristics

The profile is more than 80 inches thick. The content of silt plus clay in the 10- to 40 -inch control section ranges from 10 to 25 percent with a clay content of 2 to 10 percent. Reaction ranges from extremely acid to moderately acid throughout, except where lime has been applied.

The A or Ap horizon has hue of $10 Y R$, value of 3 or 4 , and chroma of 2 or 3 . The texture is loamy sand, loamy fine sand, or fine sand.

The C horizon dominantly has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 4 to 8 . In some pedons, however, it has chroma of 2 or less at depth of 40 inches or more. The texture is loamy sand, fine sand, loamy fine sand, or sand.

## Albany Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Southern Coastal Plain
Geomorphic setting: Low uplands and terraces
Parent material: Sandy and loamy marine sediments
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Grossarenic
Paleudults

## Associated Soils

The Albany soils are commonly associated on the landscape with Blanton, Bonneau, Boulogne, Chipley, Eunola, Falmouth, Foxworth, Garcon, Hurricane, Ocilla, Plummer, Pottsburg, Sapelo, Troup, and Wampee soils.

- The Blanton soils are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Boulogne, Pottsburg, and Sapelo soils have a spodic horizon and are poorly drained.
- The Chipley soils are sandy throughout the profile.
- The Eunola soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are moderately drained.
- The Falmouth soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and have a clayey subsoil.
- The Foxworth soils are sandy throughout and are moderately well drained.
- The Garcon, Ocilla, and Wampee soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches.
- The Hurricane soils have a spodic horizon below a depth of 50 inches.
- The Plummer soils are poorly drained.
- The Troup soils are somewhat excessively drained.


## Typical Pedon

Albany fine sand, in an area of Ocilla-Albany-Blanton complex, 0 to 5 percent slopes; about 0.5 mile east of Birley Road and 0.5 mile south of Florida Highway 252; sec. 8, T. 4 S., R. 16 E.; McAlpin, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 12 minutes, 40 seconds north and long. 82 degrees, 55 minutes, 25 seconds west.

Ap-0 to 7 inches; black (10YR 2/1) fine sand; weak medium granular structure; very friable; common fine and medium roots; strongly acid; gradual wavy boundary.
E—7 to 19 inches; pale yellow (2.5Y 7/3) fine sand; single grain; loose; common fine and medium roots; strongly acid; gradual wavy boundary.
Eg1-19 to 27 inches; pale yellow ( $2.5 \mathrm{Y} 8 / 2$ ) fine sand; single grain; loose; common medium roots; strongly acid; gradual wavy boundary.
Eg2-27 to 39 inches; white (10YR 8/1) fine sand; single grain; loose; common medium roots; common fine and medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Eg3-39 to 49 inches; white (10YR 8/1) fine sand; single grain; loose; few medium and coarse distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Bt-49 to 60 inches; 30 percent yellowish red (5YR 5/8), 30 percent yellowish brown (10YR 5/8), and 40 percent light gray (10YR 7/2) sandy loam; weak medium subangular blocky structure; very friable, slightly sticky and slightly plastic; the areas of yellowish red and yellowish brown are iron accumulations; the areas of light gray are iron depletions; very strongly acid; gradual wavy boundary.
Btg-60 to 80 inches; light gray (2.5Y 7/1) sandy clay loam; weak medium subangular blocky structure; firm, slightly sticky and moderately plastic; many medium prominent brownish yellow (10YR 6/6) and coarse prominent reddish yellow (5YR 6/6) masses of iron accumulation; very strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 70 to more than 80 inches. Reaction ranges from extremely acid to slightly acid in the A or Ap horizon, except where lime has been applied, and from extremely acid to moderately acid in the E, Eg, Bt, and Btg horizons.

The A or Ap horizon has hue of 10YR, value of 2 to 5 , and chroma of 1 or 2 . The texture is sand or fine sand.

The E horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 3 to 8 . It has few or common redoximorphic features in shades of brown, yellow, and gray. The texture is sand or fine sand.

The Eg horizon has hue of 10 YR or 2.5 Y , value of 5 to 8, and chroma of 2 or less. It has few to many redoximorphic features in shades of red, brown, or yellow. The texture is sand or fine sand.

The Bt horizon, where present, has hue of 10YR or 2.5 Y , value of 5 to 8 , and chroma of 4 or 6 ; or it is multicolored in shades of brown, yellow, red, and gray. It has common or many redoximorphic features in shades of brown, yellow, red, and gray. The texture is fine sandy loam or sandy loam.

The Btg horizon has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 2 or less. It has common or many redoximorphic features in shades of gray, yellow, brown, or red. The texture is sandy loam, fine sandy loam, or sandy clay loam.

## Alpin Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands
Parent material: Sandy marine deposits
Drainage class: Excessively drained
Permeability class: Moderately rapid

Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 12 percent
Taxonomic classification: Thermic, coated Lamellic Quartzipsamments

## Associated Soils

The Alpin soils are commonly associated on the landscape with Alaga, Blanton, Bonneau, Chiefland, Eunola, Falmouth, Padlock, Pedro Variant, and Troup soils.

- The Alaga soils have 10 to 25 percent silt plus clay in the particle-size control section, do not have lamellae, and are somewhat excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Chiefland soils are moderately deep to limestone bedrock and are moderately well drained.
- The Eunola soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are moderately well drained.
- The Falmouth soils have a clayey subsoil and are somewhat poorly drained.
- The Padlock soils have a clayey subsoil and are moderately well drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.
- The Troup soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat excessively drained.


## Typical Pedon

Alpin fine sand, 0 to 5 percent slopes (fig. 7); about 400 feet north of the Suwannee County line and 1,400 feet west of the intersection of Old Ichetucknee Road and Florida Highway 238, about 10 feet west of an unimproved dirt road; sec. 1, T. 6 S., R. 15 E.; Ellaville, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 23 minutes, 9 seconds north and long. 83 degrees, 9 minutes, 53 seconds west.

A-0 to 6 inches; grayish brown (10YR 5/2) fine sand; weak fine granular structure; common fine and few medium roots; strongly acid; gradual smooth boundary.
E1-6 to 20 inches; brown (10YR 5/3) fine sand; single grain; loose; few fine and coarse roots; strongly acid; gradual smooth boundary.
E2-20 to 44 inches; yellow (10YR 7/6) fine sand; single grain; loose; few medium roots; strongly acid; few coarse distinct very pale brown (10YR 8/2) areas of stripping; gradual wavy boundary.
E3-44 to 65 inches; light yellowish brown (10YR 6/4) fine sand; single grain; loose; many coarse distinct very dark grayish brown (10YR 3/2) organic matter accumulations; strongly acid; gradual wavy boundary.
E\&Bt-65 to 80 inches; 50 percent very pale brown (10YR 7/4) fine sand (E) and 50 percent yellowish brown (10YR 5/6) loamy fine sand (B); 3-millimeter-thick lamellae; single grain; loose; moderate medium granular structure; strongly acid.

## Range in Characteristics

The combined thickness of the sandy layers is 80 inches or more. Reaction ranges from very strongly acid to slightly acid throughout, except where lime has been applied.

The A or Ap horizon has hue of 10 YR , value of 3 to 5 , and chroma of 1 to 3 . The texture is sand, fine sand, or loamy sand.

The $E$ horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 8 , and chroma of 3 to 8 . The number of streaks and pockets of uncoated sand grains ranges from none to common. The $E$ horizon is sand or fine sand.


Figure 7.-Typical profile of Alpin fine sand, 0 to 5 percent slopes. Depth is marked in centimeters and meters.

The E part of the E\&Bt horizon has hue of 2.5 YR to 10YR, value of 7 or 8 , and chroma of 1 to 6 . It is sand or fine sand. Sand grains are mostly uncoated. The B part (lamellae) of the E\&Bt horizon has hue of 5YR to 10YR, value of 5 to 7 , and chroma of 4 to 8 . It is loamy sand, loamy fine sand, fine sandy loam, or sandy loam. The lamellae range from 1 to 25 millimeters in thickness and from 1 centimeter to more than 1 meter in horizontal length.

The Bt horizon, where present, is at a depth of more than 80 inches. It has hue of 7.5YR or 10YR, value of 6 or 7 , and chroma of 3 or 4 . The texture is sandy loam or sandy clay loam.

The C horizon, where present, has hue of 10YR, value of 6 or 7 , and chroma of 1 to 6 . The texture is sand or fine sand.

## Aquents

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats
Parent material: Sandy alluvium
Drainage class: Poorly drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Aquents

## Associated Soils

The Aquents are commonly associated on the landscape with Clara, Hurricane, Pottsburg, and Surrency soils.

- The Clara soils have a weakly expressed spodic horizon.
- The Hurricane soils have a spodic horizon below a depth of 50 inches and are somewhat poorly drained.
- The Pottsburg soils have a spodic horizon below a depth of 50 inches.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Aquents, frequently flooded; about 400 feet north and 900 feet east of the southwest corner of sec. 3, T. 3 S., R. 14 E.; McAlpin, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 35 minutes, 6 seconds north and long. 84 degrees, 36 minutes, 32 seconds west.

Ap-0 to 4 inches; sand, black (10YR 2/1) rubbed; weak fine granular structure; very friable; common fine roots; extremely acid; clear wavy boundary.
E-4 to 10 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; common fine roots; strongly acid; clear wavy boundary.
Bw-10 to 17 inches; dark brown (10YR $3 / 3$ ) sand; weak fine granular structure; friable; common fine roots; very strongly acid; clear wavy boundary.
C1-17 to 24 inches; grayish brown (10YR 5/2) sand; weak fine granular structure; common medium roots; strongly acid; gradual wavy boundary.
C2-24 to 44 inches; light gray (10YR 7/2) sand; single grain; loose; common fine roots; strongly acid; gradual wavy boundary.
C3-44 to 63 inches; light brownish gray (10YR 6/2) sand; single grain; loose; strongly acid; gradual wavy boundary.

C4—63 to 80 inches; pale brown (10YR 6/3) sand; single grain; loose; strongly acid.

## Range in Characteristics

Reaction ranges from extremely acid to strongly acid throughout.
The A or Ap horizon has hue of 7.5 YR or 10YR, value of 2 to 4 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 to 4 . When dry, this horizon has a salt-andpepper appearance due to mixing of organic matter and white sand grains. The texture is sand, fine sand, or mucky fine sand.

The E horizon has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 5 to 8 . The number of redoximorphic features and streaks in shades of black or gray ranges from none to common. The texture is sand or fine sand.

The Bw horizon has hue of 10 YR or 2.5 Y , value of 3 or 4 , and chroma of 3 to 8 . The texture is sand or fine sand

The C horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 2 to 8 . The texture is sand or fine sand.

## Bibb Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Sandy and loamy alluvial deposits
Drainage class: Poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

## Associated Soils

The Bibb soils are commonly associated on the landscape with Bigbee, Blanton, Eunola, and Osier soils.

- The Bigbee soils are sandy throughout and are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Eunola soils have a fine-loamy subsoil and are moderately well drained.
- The Osier soils are sandy throughout.


## Typical Pedon

Bibb silt loam, in an area of Osier-Bibb-Albany complex, frequently flooded; about 4,100 feet north and 500 feet west of the southeast corner of sec. 28, T. 2 N., R. 13 E.; Jennings, Florida, USGS 7.5-minute quadrangles; lat. 30 degrees, 32 minutes, 29 seconds north and long. 83 degrees, 1 minute, 11 seconds west.
A-0 to 2 inches; very dark gray (10YR 3/1) silt loam; weak fine subangular blocky structure; very friable; common fine roots; strongly acid; gradual wavy boundary.
$\mathrm{Ag}-2$ to 17 inches; brown (10YR 4/2) sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; gradual smooth boundary.
Cg1-17 to 30 inches; grayish brown (10YR 5/2) sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; gradual wavy boundary. Cg2-30 to 42 inches; grayish brown (10YR 5/2) sandy loam; weak fine granular
structure; very friable; few fine faint brownish yellow (10YR 6/6) masses of iron accumulation; few medium faint gray (10YR $5 / 1$ ) areas of iron depletion; strongly acid; gradual wavy boundary.
Cg3-42 to 80 inches; 15 percent light gray (10YR 7/2), 35 percent grayish brown (10YR 5/2), and 50 percent dark gray (10YR 4/1) loamy fine sand; massive; very friable; the areas of light gray, grayish brown, and dark gray are iron depletions; strongly acid.

## Range in Characteristics

The thickness of the sandy substratum is more than 80 inches. Reaction ranges from extremely acid to strongly acid throughout the profile.

The A or Ap horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 or 2 . The texture is sandy loam, silt loam, or loam.

The Ag horizon has hue of 10 YR , value of 2 to 4 , and chroma of 1 or 2 . The combined thickness of the A and Ag horizons with value of 3 or less is less than 6 inches. The texture is sandy loam, silt loam, or loamy fine sand.

The Cg horizon has hue of 10YR, value of 3 to 7 , and chroma of 1 or 2 . It has few to many redoximorphic accumulations in shades of red, yellow, and brown. The texture ranges from sandy loam to silt loam in the upper part and is sand, fine sand, or loamy fine sand in the lower part. This horizon is stratified in most pedons.

## Bigbee Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Southern Coastal Plain
Geomorphic setting: Flood plains and low stream terraces
Parent material: Sandy marine sediments
Drainage class: Excessively drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Thermic, coated Typic Quartzipsamments

## Associated Soils

The Bigbee soils are commonly associated on the landscape with Bibb, Blanton, Clara, Eunola, Garcon, Meggett, Ousley, and Pedro Variant soils.

- The Bibb soils have a coarse-loamy control section and are poorly drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Clara soils are poorly drained.
- The Eunola soils have a loamy subsoil and are moderately well drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Meggett soils have a clayey subsoil and are poorly drained.
- The Ousley soils are somewhat poorly drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.


## Typical Pedon

Bigbee fine sand, in an area of Bigbee-Garcon-Meggett complex, occasionally flooded; about 2,250 feet north and 1,630 feet west of the southeast corner of sec. 33, T. 2 N., R. 16 E.; Fargo SW, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 31 minutes, 57 seconds north and long. 82 degrees, 43 minutes, 1 second west.

A-0 to 9 inches; brown (10YR 4/3) fine sand; weak fine granular structure; very friable; very strongly acid; clear smooth boundary.
C1-9 to 20 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose; very strongly acid; gradual wavy boundary.
C2-20 to 36 inches; brownish yellow (10YR 6/6) fine sand; single grain; loose; very strongly acid; gradual wavy boundary.
C3-36 to 55 inches; brown (10YR 5/3) fine sand; single grain; loose; very strongly acid; gradual wavy boundary.
C4-55 to 80 inches; light gray (10YR 6/1) sand; single grain; loose; very strongly acid.

## Range in Characteristics

The combined thickness of the sandy layers is 80 inches or more. Reaction ranges from very strongly acid to moderately acid throughout, except where lime has been applied.

The A horizon has hue of 10 YR , value of 3 to 5 , and chroma of 2 to 4 . The texture is loamy sand, loamy fine sand, sand, or fine sand.

The upper part of the C horizon has hue of 5 YR to 10 YR , value of 4 to 7 , and chroma of 4 or 5 . The number of redoximorphic features in shades of brown ranges from none to few. The texture is loamy sand, sand, or fine sand. The content of silt plus clay in the 10 - to 40 -inch particle-size control section ranges from 5 to 10 percent.

The lower part of the C horizon has hue of 10 YR , value of 6 to 8 , and chroma of 1 to 6 . The number of iron accumulations in shades of brown and yellow ranges from none to common. Some pedons have iron depletions below a depth of 40 inches. The lower part of the C horizon has few pockets of uncoated sand grains and is fine sand or sand.

## Blanton Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands and stream terraces
Parent material: Sandy and loamy marine sediments
Drainage class: Moderately well drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 35 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Grossarenic Paleudults

## Associated Soils

The Blanton soils are commonly associated on the landscape with Alaga, Albany, Alpin, Bibb, Bigbee, Bonneau, Boulogne, Chipley, Falmouth, Ichetucknee, Lynchburg, Ocilla, Ousley, Padlock, Pantego, Pedro Variant, Troup, and Wampee soils.

- The Alaga soils are sandy throughout and are somewhat excessively drained.
- The Albany soils are somewhat poorly drained.
- The Alpin soils are sandy throughout and are excessively drained.
- The Bibb soils have a coarse-loamy subsoil and are poorly drained.
- The Bigbee soils are sandy throughout and are excessively drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Boulogne soils have a spodic horizon and are poorly drained.
- The Chipley and Ousley soils are sandy throughout and are somewhat poorly drained.
- The Falmouth soils have a clayey subsoil, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and are somewhat poorly drained.
- The Ichetucknee soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, are deep to limestone bedrock, and are somewhat poorly drained.
- The Lynchburg soils have sandy surface and subsurface horizons with a combined thickness of less than 20 inches and are somewhat poorly drained.
- The Ocilla and Wampee soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Padlock soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and have a clayey subsoil.
- The Pantego soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are very poorly drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.
- The Troup soils have a subsoil that is redder than that of the Blanton soils and are somewhat excessively drained.


## Typical Pedon

Blanton fine sand, in an area of Blanton-Padlock-Alpin complex, 0 to 5 percent slopes; about 1.0 mile south of Florida Highway 252, about 800 feet west of Birley Road, and 25 feet east of Woods Road; sec. 8, T. 4 S., R. 16 E.; O'Brien, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 6 minutes, 7 seconds north and long. 82 degrees, 57 minutes, 1 second west.

Ap-0 to 5 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; common very fine and medium roots; strongly acid; clear wavy boundary.
E1-5 to 13 inches; light olive brown (2.5Y 5/3) fine sand; single grain; loose; common fine roots; strongly acid; gradual smooth boundary.
E2-13 to 27 inches; light yellowish brown (2.5Y 6/3) fine sand; single grain; loose; common fine and medium roots; strongly acid; clear wavy boundary.
E3-27 to 36 inches; pale yellow (2.5Y 8/3) fine sand; single grain; loose; common medium roots; strongly acid; gradual wavy boundary.
E4-36 to 41 inches; light gray (2.5Y 7/2) fine sand; single grain; loose; strongly acid; clear wavy boundary.
Bt1-41 to 48 inches; pale brown (10YR 6/3) sandy loam; weak medium subangular blocky structure; very friable, slightly sticky and slightly plastic; common medium distinct light brownish gray ( $2.5 \mathrm{Y} 6 / 2$ ) areas of iron depletion; strongly acid; gradual wavy boundary.
Bt2-48 to 67 inches; 30 percent yellowish red (5YR 5/6), 30 percent yellowish brown (10YR 5/6), and 40 percent light brownish gray ( $2.5 \mathrm{Y} 6 / 2$ ) sandy clay loam; weak medium subangular blocky structure; friable, moderately sticky and slightly plastic; the areas of yellowish red and yellowish brown are iron accumulations; the areas of light brownish gray are iron depletions; strongly acid; gradual wavy boundary.
Btg1-67 to 74 inches; gray (10YR 6/1) sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky and slightly plastic; common medium distinct yellowish brown (10YR 5/6) and many coarse prominent light olive brown (2.5Y 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg2-74 to 80 inches; gray (10YR 6/1) sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky and slightly plastic;
common medium distinct red (2.5YR 4/6) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 60 to more than 80 inches. Reaction ranges from very strongly acid to moderately acid throughout, except where lime has been applied. The content of plinthite is less than 5 percent within a depth of 60 inches but ranges up to 15 percent below a depth of 60 inches.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 to 7 , and chroma of 1 to 4. The horizon is less than 10 inches thick where value is 3.5 or less. The texture is sand, fine sand, coarse sand, loamy sand, loamy fine sand, or the gravelly analogs of those textures.

The E horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 8 , and chroma of 1 to 8 . The texture has the same range as the A or Ap horizon. The E horizon has 50 percent or more uncoated sand grains.

The BE horizon, where present, has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 . The texture is loamy sand, loamy coarse sand, loamy fine sand, or sandy loam.

The Bt horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 ; or it has no dominant color and is multicolored in shades of brown, yellow, red, and gray. In most pedons, the upper 10 inches of the horizon has redoximorphic depletions. The Bt horizon is loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam.

The Btg horizon, where present, has hue of 7.5 YR to 5 Y , value of 5 to 8 , and chroma of 1 or 2. It has common or many redoximorphic features in shades of brown, yellow, red, and gray. The texture is sandy loam, fine sandy loam, or sandy clay loam, and, below a depth of 60 inches, ranges to sandy clay.

## Bonneau Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands
Parent material: Marine sediments
Drainage class: Well drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 8 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Arenic Paleudults

## Associated Soils

The Bonneau soils are commonly associated on the landscape with Albany, Alpin, Blanton, Falmouth, Ichetucknee, Lynchburg, Ocilla, Padlock, Pantego, Troup, and Wampee soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Alpin soils are sandy throughout and are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Falmouth soils have a clayey subsoil, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and are somewhat poorly drained.
- The Ichetucknee soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, are deep to limestone bedrock, and are somewhat poorly drained.
- The Lynchburg soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are somewhat poorly drained.
- The Ocilla soils are somewhat poorly drained.
- The Padlock soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are moderately well drained.
- The Pantego soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are very poorly drained.
- The Troup soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat excessively drained.
- The Wampee soils are somewhat poorly drained.


## Typical Pedon

Bonneau fine sand, in an area of Blanton-Bonneau complex, 0 to 5 percent slopes; about 0.75 mile west of U.S. Highway 41 , about 0.5 mile south of New Mount Zion Church, and 200 feet east of Suwannee Valley Road; SW $1 / 4 \mathrm{SE}^{1 / 4} \mathrm{sec}$. 21, T. 2 S., R. 16 E.; White Springs East, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 17 minutes, 47 seconds north and long. 82 degrees, 42 minutes, 60 seconds west.
A-0 to 7 inches; grayish brown (10YR 5/2) fine sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.
E1-7 to 15 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose; many coarse distinct light yellowish brown ( $2.5 \mathrm{Y} 6 / 3$ ) areas of stripping; strongly acid; gradual wavy boundary.
E2-15 to 27 inches; brownish yellow (10YR 6/6) fine sand; single grain; loose; strongly acid; gradual wavy boundary.
$\mathrm{Bt} 1-27$ to 36 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable, slightly sticky and slightly plastic; strongly acid; gradual wavy boundary.
Bt2-36 to 58 inches; 20 percent grayish brown (2.5Y 5/2), 20 percent yellowish red (5YR 4/6), 30 percent very pale brown (10YR 7/4), 15 percent fine faint pale brown (10YR 6/3), and 15 percent coarse prominent strong brown (7.5YR 5/8) sandy clay loam; strong medium subangular blocky structure; friable, slightly sticky and slightly plastic; the areas of yellowish red, very pale brown, and strong brown are iron accumulations; the areas of grayish brown and pale brown are iron depletions; strongly acid; gradual wavy boundary.
Btg1-58 to 74 inches; 25 percent grayish brown (2.5Y 5/2), 25 percent gray (10YR $5 / 1$ ), and 50 percent very pale brown (10YR 7/4) sandy clay loam; strong medium subangular blocky structure; friable, moderately sticky and moderately plastic; the areas of grayish brown and gray are iron depletions; the areas of very pale brown are iron accumulations; strongly acid; gradual wavy boundary.
Btg2— 74 to 80 inches; 50 percent gray (10YR 5/1) and 50 percent pink (7.5YR 7/4) sandy clay loam; weak medium angular blocky structure; friable, moderately sticky and moderately plastic; the areas of gray are iron depletions; the areas of pink are iron accumulations; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 60 to more than 80 inches. Reaction ranges from extremely acid to slightly acid in the A and E horizons and from extremely acid to moderately acid in the Bt horizon. In some pedons, the lower part of the Bt horizon has less than 5 percent, by volume, plinthite.

The A or Ap horizon has hue of 7.5 YR to 2.5 Y , value of 3 to 5 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 3 to 5 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E horizon has hue of 10 YR or 2.5 Y , value of 4 to 8 , and chroma of 2 to 6 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The upper part of the Bt horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 . The texture is sandy loam, fine sandy loam, or sandy clay loam.

The lower part of the Bt horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 ; or it is multicolored in shades of brown, red, gray, or yellow. The number of redoximorphic features in shades of gray, brown, red, or yellow ranges from none to common. The texture is sandy loam, fine sandy loam, sandy clay loam, or sandy clay.

The BC horizon, where present, has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 ; or it is multicolored in shades of brown, red, gray, or yellow. It has few or common redoximorphic features in shades of gray, brown, red, or yellow. The texture is sandy loam, fine sandy loam, sandy clay loam, or sandy clay.

The Btg horizon, where present, has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 1 or 2. It has few or common redoximorphic features in shades of gray, brown, red, or yellow. The texture is sandy loam, fine sandy loam, sandy clay loam, or sandy clay.

The BCg horizon, where present, has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 1 or 2 . It has few or common redoximorphic features in shades of gray, brown, red, or yellow. It has redoximorphic depletions of chroma 2 or less within a depth of 60 inches. The content of plinthite nodules, where present, is less than 5 percent, by volume. The texture is sandy loam, fine sandy loam, sandy clay loam, or sandy clay.

## Boulogne Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats
Parent material: Sandy marine sediments
Drainage class: Poorly drained
Permeability class: Moderately rapid to rapid (noncemented)
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Typic Alaquods

## Associated Soils

The Boulogne soils are commonly associated on the landscape with Albany, Blanton, Chipley, Hurricane, and Ichetucknee soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Chipley soils do not have a spodic horizon and are somewhat poorly drained.
- The Hurricane soils have a spodic horizon below a depth of 50 inches and are somewhat poorly drained.
- The Ichetucknee soils are deep to soft limestone bedrock and are somewhat poorly drained.


## Typical Pedon

Boulogne fine sand, in an area of Boulogne-Chipley-Hurricane complex, 0 to 5 percent slopes; about 1,000 feet west of Boney Road and 2,200 feet north of Cedar Point Road; sec. 31, T. 1 N., R. 28 E.; Eastport, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 28 minutes, 3 seconds north and long. 81 degrees, 31 minutes, 55 seconds west.

A-0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; extremely acid; clear smooth boundary.
Bh-6 to 16 inches; dark brown (7.5YR 3/2) fine sand; weak fine granular structure; very friable; very strongly acid; gradual wavy boundary.
E-16 to 31 inches; light gray (10YR 7/2) fine sand; single grain; loose; strongly acid; gradual smooth boundary.
B'h1-31 to 39 inches; dark reddish brown (5YR 3/3) fine sand; weak fine granular structure; friable; strongly acid; gradual smooth boundary.
B'h2-39 to 60 inches; black (5YR 2/1) fine sand; weak fine granular structure; friable; strongly acid; gradual wavy boundary.
B'h3-60 to 80 inches; 50 percent dark reddish brown and 50 percent black (5YR $2 / 1$ ) fine sand; weak fine granular structure; very firm; strongly acid.

## Range in Characteristics

The solum is more than 80 inches thick. Reaction ranges from extremely acid to moderately acid throughout the profile.

The A or Ap horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 or 2 . The texture is sand or fine sand.

The Bh horizon has hue of 5 YR to 10YR, value of 2 or 3 , and chroma of 1 to 3 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E/Bh horizon, where present, has hue of 7.5 YR , value of 4 or 5 , and chroma of 2. It has few or common bodies of Bh material. The E/Bh horizon is sand, fine sand, loamy sand, or loamy fine sand.

The E horizon has hue of 10 YR , value of 4 to 7 , and chroma of 1 or 2 . The texture is sand or fine sand.

The B'h horizon has hue of 5 YR or 7.5 YR , value of 2 or 3 , and chroma of 1 or 2 . More than half of the horizon in each pedon is weakly cemented in the lower part. Depth to a firm or very firm, weakly cemented B'h horizon is more than 50 inches. The texture is sand, fine sand, loamy sand, or loamy fine sand.

## Cantey Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Unconsolidated clayey sediments
Drainage class: Poorly drained
Permeability class: Slow
Soil depth class: Very deep
Shrink-swell potential: Moderate
Slope: 0 to 1 percent
Taxonomic classification: Fine, kaolinitic, thermic Typic Albaquults

## Associated Soils

The Cantey soils are commonly associated on the landscape with Ocilla, Plummer, and Surrency soils.

- The Ocilla soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Cantey sandy loam, in an area of Surrency, Plummer, and Cantey soils, frequently flooded; about 2.6 miles west of the junction of U.S. Highway 90 and secondary road 360-A, about 0.18 mile south of Captain Broad Road; $\mathrm{NW}^{11 / 4} \mathrm{SE}^{1 / 4} \mathrm{sec}$. 19 , T. 1 N., R. 9 E.; Madison, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 28 minutes, 11 seconds north and long. 83 degrees, 27 minutes, 31 seconds west.

A1-0 to 5 inches; very dark gray (10YR 3/1) sandy loam; weak medium granular structure; friable; common very fine and fine roots; very strongly acid; clear wavy boundary.
A2-5 to 9 inches; dark gray (10YR 4/1) sandy loam; weak medium granular structure; very friable; common fine roots; very strongly acid; gradual wavy boundary.
E-9 to 19 inches; light brownish gray (10YR 6/2) sandy loam; moderate medium granular structure; friable; common fine roots; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; many fine faint gray (10YR 6/1) areas of iron depletion; very strongly acid; clear wavy boundary.
Btg1-19 to 26 inches; light brownish gray (10YR 6/2) sandy clay; moderate medium subangular blocky structure; firm, slightly sticky and moderately plastic; common fine roots; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg2-26 to 37 inches; gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky and moderately plastic; common medium prominent red (2.5YR 4/6) and many fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg3-37 to 80 inches; gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky and moderately plastic; few medium prominent brownish yellow (10YR 6/6) and common medium prominent strong brown (7.5YR $5 / 6$ ) masses of iron accumulation; many fine faint light brownish gray (10YR 6/2) areas of iron depletion; very strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 60 to more than 80 inches. Reaction ranges from extremely acid to slightly acid in the A horizon and from extremely acid to strongly acid throughout the rest of the profile.

The A horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 or 2 . The texture is sandy loam, fine sandy loam, silt loam, or loam.

The E horizon, where present, has hue of 10YR, value of 5 or 6 , and chroma of 1 or 2 . The texture is sandy loam or fine sandy loam. The number of redoximorphic features in shades of gray and brown ranges from none to common.

The Btg horizon has hue of 10 YR to 5 Y , value of 5 to 7 , and chroma of 1 or 2 . The texture is sandy clay or clay. The number of redoximorphic features in shades of red, brown, yellow, and gray ranges from none to many.

Some pedons have a BCg or Cg horizon below a depth of 60 inches. Where present, it has colors similar to those in the Btg horizon and has varying textures of stratified sand and clay, sandy clay loam, clay loam, silty clay loam, silty clay, and sandy clay.

## Chiefland Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands and karst
Parent material: Sandy and loamy marine deposits overlying limestone
Drainage class: Moderately well drained
Permeability class: Moderate
Soil depth class: Moderately deep to limestone bedrock
Shrink-swell potential: Low
Slope: 0 to 8 percent
Taxonomic classification: Loamy, siliceous, active, thermic Arenic Hapludalfs

## Associated Soils

The Chiefland soils are commonly associated on the landscape with Alpin, Chipley, Ichetucknee, Otela, Padlock, and Pedro Variant soils.

- The Alpin soils are very deep, sandy throughout, and excessively drained.
- The Chipley soils are very deep, sandy throughout, and somewhat poorly drained.
- The Ichetucknee soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, are deep to limestone bedrock, and are somewhat poorly drained.
- The Otela soils are very deep, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and are moderately well drained.
- The Padlock are very deep, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are moderately well drained.
- The Pedro Variant soils are shallow to limestone bedrock.


## Typical Pedon

Chiefland fine sand, in an area of Otela-Chiefland-Ichetucknee complex, 0 to 5 percent slopes; about 0.55 mile east of U.S. Highway 441 and 0.3 mile north of Bellamy Road; SW¼NE¼ sec. 3, T. 7 S., R. 17 E.; Mikesville, Florida, USGS 7.5minute quadrangle; lat. 29 degrees, 54 minutes, 35 seconds north and long. 82 degrees, 36 minutes, 9 seconds west.

Ap-0 to 8 inches; brown (10YR 5/3) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine roots; moderately acid; gradual smooth boundary.
E-8 to 33 inches; pale brown (10YR 6/3) fine sand; few fine prominent brownish yellow (10YR 6/6) and common medium faint brown (10YR 5/3) splotches and streaks; single grain; loose, nonsticky and nonplastic; moderately acid; clear wavy boundary.
Bt-33 to 39 inches; strong brown (7.5YR 5/8) fine sandy loam; weak medium subangular blocky structure; friable, moderately sticky and moderately plastic; neutral; abrupt wavy boundary.
$2 \mathrm{Cr}-39$ to 80 inches; very pale brown (10YR 8/2), soft limestone bedrock.

## Range in Characteristics

The thickness of the solum over soft limestone dominantly ranges from 20 to 40 inches. Some pedons, however, have solution holes in which the solum extends to below a depth of 40 inches. Reaction ranges from strongly acid to neutral in the A or Ap horizon and from moderately acid to moderately alkaline in the Bt horizon.

The A or Ap horizon has hue of 10YR, value of 4 to 6 , and chroma of 3 or less. The texture is sand or fine sand.

The E horizon has hue of 7.5 YR or 10YR, value of 5 to 7 , and chroma of 2 to 8 . The number of redoximorphic features in shades of brown, yellow, and gray ranges from none to common. The texture is sand or fine sand.

The Bt horizon has hue of 7.5 YR or 10YR, value of 4 to 6 , and chroma of 4 to 8 . It has few or common redoximorphic features in shades of gray, brown, and yellow. It also has few or common soft limestone nodules or fragments in the lower part. The Bt horizon is fine sandy loam or sandy clay loam.

The 2 Cr horizon is composed of soft, weathered limestone. It has hue of 10YR, value of 6 to 8 , and chroma of 1 to 4 . It has few to many hard limestone fragments.

## Chipley Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Southern Coastal Plain
Geomorphic setting: Uplands
Parent material: Sandy marine deposits
Drainage class: Somewhat poorly drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Thermic, coated Aquic Quartzipsamments

## Associated Soils

The Chipley soils are commonly associated on the landscape with Alaga, Albany, Blanton, Boulogne, Chiefland, Falmouth, Foxworth, Hurricane, and Sapelo soils.

- The Alaga soils are somewhat excessively drained.
- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Boulogne soils have a spodic horizon and are poorly drained.
- The Chiefland soils are moderately deep to limestone bedrock and are well drained.
- The Falmouth soils have a clayey subsoil.
- The Foxworth soils are moderately well drained.
- The Hurricane soils have a spodic horizon below a depth of 50 inches.
- The Sapelo soils have a spodic horizon and are poorly drained.


## Typical Pedon

Chipley fine sand, in an area of Chipley-Foxworth-Albany complex, 0 to 5 percent slopes; about 2.5 miles west of U.S. Highway 221, about 1.5 miles north of the Taylor County line; NW ${ }^{1 / 4} 4 W^{1} / 4$ NW $^{1 / 1} / 4$ sec. 12, T. 2 S., R. 6 E.; Shady Grove, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 19 minutes, 39 seconds north and long. 83 degrees, 41 minutes, 8 seconds west.
Ap-0 to 6 inches; grayish brown (10YR 5/2) fine sand; weak fine granular structure; very friable; common very fine roots; very strongly acid; clear wavy boundary.
C1-6 to 23 inches; yellowish brown (10YR 5/4) fine sand; single grain; loose; common fine roots; strongly acid; gradual wavy boundary.
C2-23 to 47 inches; very pale brown (10YR 7/4) fine sand; single grain; loose; many distinct dark brown (10YR $3 / 3$ ) organic stains on sand grains; common fine prominent yellowish brown (10YR 5/8) and many fine faint yellow (10YR 7/6) masses of iron accumulation; many medium distinct very pale brown (10YR 8/2) areas of iron depletion; strongly acid; gradual irregular boundary.

Cg-47 to 80 inches; white (10YR 8/1) fine sand; single grain; loose; common medium distinct yellow (10YR 8/6) and common medium prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid.

## Range in Characteristics

The solum is more than 80 inches thick. The content of silt plus clay in the 10- to 40 -inch control section ranges from 5 to 10 percent. Reaction ranges from extremely acid to moderately acid in the A horizon, except where limed has been applied, and from strongly acid to slightly acid in the C and Cg horizons.

The A or Ap horizon has hue of 10YR, value of 3 to 5 , and chroma of 1 to 3 . Where value is 3.5 or less, the horizon is less than 10 inches thick. The texture is sand or fine sand.

The C horizon has hue of 10 YR to 5 Y , value of 4 to 8 , and chroma of 1 to 8 . It has few to many redoximorphic features in shades of gray, brown, red, and yellow. The texture is sand or fine sand.

The Cg horizon has hue of 10 YR to 5 Y , value of 4 to 8 , and chroma of 2 or less; or it is neutral in hue and has value of 4 to 8 . It has common or many redoximorphic features in shades of red, brown, or yellow. The texture is sand or fine sand.

## Clara Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Sandy marine sediments
Drainage class: Poorly drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Siliceous, thermic Spodic Psammaquents

## Associated Soils

The Clara soils are commonly associated on the landscape with Bigbee, Garcon, Leon, Meadowbrook, and Meggett soils.

- The Bigbee soils are excessively drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Leon soils have a spodic horizon less than 30 inches below the surface.
- The Meadowbrook soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Meggett soils have a clayey subsoil.


## Typical Pedon

Clara muck, in an area of Clara and Meadowbrook soils, frequently flooded; about 500 feet north and 1,800 feet east of a trail road; about 1,500 feet south and 1,200 feet east of the northwest corner of sec. 13, T. 7 S., R. 11 E.; Mallory Swamp SW, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 52 minutes, 42 seconds north and long. 83 degrees, 10 minutes, 58 seconds west.

Oa-0 to 6 inches; muck, black (10YR 2/1) rubbed; weak fine granular structure; friable; common fine roots; very strongly acid; clear wavy boundary.
E-6 to 18 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; common fine roots; very strongly acid; clear wavy boundary.

Bw1-18 to 23 inches; brown (10YR 4/3) fine sand; weak fine granular structure; very friable; common fine roots; many distinct dark brown (10YR $3 / 3$ ) organic stains on faces of peds; very strongly acid; gradual wavy boundary.
Bw2-23 to 48 inches; brown (10YR 5/3) fine sand; weak fine granular structure; very friable; common very fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; very strongly acid; gradual wavy boundary.
C-48 to 80 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; common fine roots; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 20 to 60 inches. Soil depth is more than 80 inches. Reaction ranges from extremely acid to moderately alkaline throughout.

The Oa horizon, where present, is less than 7 inches thick. It has hue of 5YR to 10 YR , value of 2 or 3 , and chroma of 2 or less. The texture is muck.

The A horizon, where present, has hue of 10 YR , value of 2 to 4 , and chroma of 2 or less. The texture is sand, fine sand, mucky sand, or mucky fine sand.

The E horizon has hue of 10YR, value of 5 to 7 , and chroma of 1 to 3 . The number of redoximorphic features and vertical streaks in shades of brown or gray ranges from none to common. The texture is sand or fine sand.

The Bw horizon has hue of 10 YR , value of 4 or 5 , and chroma of 3 to 6 . Where chroma is less than 6 in the upper part, the color is more than 1 unit of value darker than the overlying E horizon. In some pedons, the upper part of the horizon has small splotches, streaks, or discontinuous lenses of organically stained material. The number of redoximorphic features in shades of brown, yellow, or gray ranges from none to common. The texture is sand or fine sand.

The C horizon has hue of 10YR, value of 5 to 7 , and chroma of 2 or less. The number of redoximorphic features in shades of brown or yellow ranges from none to common. The texture is sand, fine sand, or loamy fine sand.

## Eunola Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Low streams and marine terraces
Parent material: Fluvial or marine sediments
Drainage class: Moderately well drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

## Associated Soils

The Eunola soils are commonly associated on the landscape with Albany, Alpin, Bibb, Bigbee, Garcon, and Meggett soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Alpin soils are sandy throughout, have thin layers of lamellae, and are excessively drained.
- The Bibb soils have a coarse-loamy control section and are poorly drained.
- The Bigbee soils are sandy throughout and are excessively drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Meggett soils have a clayey subsoil and are poorly drained.


## Typical Pedon

Eunola fine sand, in an area of Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded; about 400 feet north and 100 west of a trail road; about 1,000 feet north and 2,000 feet east of the southwest corner of sec. 28, T. 5 S., R. 13 E.; Mayo SE, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 1 minute, 2 seconds north and long. 83 degrees, 1 minute, 29 seconds west.
A-0 to 7 inches; very dark grayish brown (10YR $3 / 2$ ) fine sand; weak fine granular structure; very friable; strongly acid; clear wavy boundary.
E-7 to 18 inches; pale brown (10YR 6/3) loamy fine sand; weak fine granular structure; very friable; common fine roots; common medium distinct strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; abrupt wavy boundary.
Bt1-18 to 24 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; strongly acid; gradual wavy boundary.
Bt2-24 to 27 inches; light yellowish brown (10YR 6/4) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky and nonplastic; common fine roots; common medium distinct yellowish red (5YR 5/6) masses of iron accumulation; common fine distinct grayish brown (10YR 5/2) areas of iron depletion; strongly acid; gradual wavy boundary.
Bt3-27 to 35 inches; grayish brown (10YR 5/2) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky and slightly plastic; common fine roots; common medium distinct yellowish brown (10YR 5/6) and many medium prominent red (10R 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bt4-35 to 50 inches; light brownish gray (10YR 6/2) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky and moderately plastic; many coarse prominent dark red (2.5YR 3/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
BC-50 to 56 inches; grayish brown (10YR 5/2) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky and nonplastic; many medium distinct reddish brown (5YR 5/4) masses of iron accumulation; strongly acid; clear wavy boundary.
C1-56 to 68 inches; brown (7.5YR 5/4) loamy sand; massive; very friable, nonsticky and nonplastic; common medium distinct yellowish brown (10YR $5 / 8$ ) masses of iron accumulation; strongly acid; gradual wavy boundary.
C2-68 to 80 inches; pale brown (10YR 6/3) sand; single grain; loose, nonsticky and nonplastic; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 40 to 60 inches. Reaction is very strongly acid or strongly acid throughout, except where lime has been applied.

The A or Ap horizon has hue of 10 YR or 2.5 Y , value of 3 to 5 , and chroma of 1 to 4. The texture is loam, fine sandy loam, sandy loam, loamy fine sand, loamy sand, or fine sand.

The E horizon, where present, has hue of 10 YR or 2.5 Y , value of 3 to 7 , and chroma of 3 or 4 . The texture is fine sandy loam, sandy loam, loamy fine sand, loamy sand, or fine sand.

The BE horizon, where present, has hue of 7.5 YR or 10YR, value of 5 to 7 , and chroma of 4 to 8 . The texture is sandy loam or fine sandy loam.

The upper part of the Bt horizon typically has hue of 7.5 YR to 2.5 Y , value of 4 to 7 , and chroma of 4 to 8 . Redoximorphic features, where present, are in shades of
brown, yellow, red, or gray. The texture is fine sandy loam, sandy loam, clay loam, or sandy clay loam.

The lower part of the Bt horizon has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 to 8 and redoximorphic features in shades of yellow, brown, red, or gray; or it is multicolored in shades of yellow, brown, red, or gray. Iron depletions with chroma 2 or less are within the upper 20 inches of the argillic horizon. The lower part of the Bt horizon is sandy clay loam, sandy clay, or clay loam.

The BC horizon and the C or 2 C horizon have the same range in hue, value, chroma, and redoximorphic features as the lower part of the Bt horizon. The texture of the $B C$ horizon is sandy clay loam, fine sandy loam, sandy loam, or coarse sandy loam. The texture of the C or 2C horizon is dominantly fine sand, coarse sand, sand, loamy coarse sand, loamy sand, sandy loam, or fine sandy loam or those textures stratified with sandy clay loam. In some pedons, however, the texture is stratified sandy loam, sandy clay loam, and clay.

## Falmouth Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Southern Coastal Plain
Geomorphic setting: Uplands
Parent material: Clayey marine deposits
Drainage class: Somewhat poorly drained
Permeability class: Very Slow
Soil depth class: Very deep
Shrink-swell potential: High
Slope: 0 to 8 percent
Taxonomic classification: Fine, smectitic, thermic Aquertic Chromic Hapludalfs

## Associated Soils

The Falmouth soils are commonly associated on the landscape with Albany, Alpin, Blanton, Bonneau, Chipley, Foxworth, Ocilla, and Padlock soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Alpin soils are sandy throughout and are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Chipley soils are sandy throughout.
- The Foxworth soils are sandy throughout and are moderately well drained.
- The Ocilla soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches.
- The Padlock soils have a mixed mineralogy control section and are moderately well drained.


## Typical Pedon

Falmouth fine sand (fig. 8), in an area of Falmouth-Bonneau-Blanton complex, 0 to 5 percent slopes; 820 feet north and 700 feet west of $\mathrm{SE}^{1 / 4} \mathrm{sec} .29$, T. 1 S., R. 12 E.; Falmouth, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 21 minutes, 53 seconds north and long. 83 degrees, 7 minutes, 58 seconds west.

Ap-0 to 3 inches; very dark gray (10YR 3/1) fine sand; weak medium granular structure; very friable, nonsticky and nonplastic; common fine roots; strongly acid; clear smooth boundary.


Figure 8.-Typical profile of Falmouth fine sand, in an area of Falmouth-Bonneau-Blanton complex, 0 to 5 percent slopes. Depth is marked in centimeters and meters.

E-3 to 10 inches; dark grayish brown (2.5Y 4/2) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine roots; strongly acid; clear wavy boundary.
Bt1-10 to 17 inches; yellowish brown (10YR 5/4) sandy clay loam; weak coarse subangular blocky structure; firm, moderately sticky and moderately plastic; common fine roots; common medium distinct yellowish red ( 5 YR $5 / 8$ ) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bt2-17 to 30 inches; brown (10YR 5/3) sandy clay; moderate coarse subangular blocky structure; firm, very sticky and very plastic; common fine roots; common medium distinct grayish brown (10YR 5/2) areas of iron depletion; common medium distinct yellowish red (5YR 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg1-30 to 43 inches; gray (2.5Y 5/1) sandy clay; strong medium subangular blocky structure; very firm, very sticky and very plastic; common fine roots; common medium prominent yellowish brown (10YR 5/6) and yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg2-43 to 65 inches; gray ( $2.5 \mathrm{Y} 5 / 1$ ) sandy clay; weak coarse subangular blocky structure; very firm, very sticky and very plastic; common fine roots; common medium prominent yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Cg-65 to 80 inches; 25 percent strong brown (7.5YR 5/8), 25 percent gray ( $5 \mathrm{Y} 5 / 1$ ), 25 percent yellowish brown (10YR 5/6), and 25 percent brown (10YR 4/3) sandy clay; massive; very firm, very sticky and very plastic; common fine roots; the areas of strong brown, yellowish brown, and brown are iron accumulations; the areas of gray are iron depletions; moderately acid.

## Range in Characteristics

The solum is more than 60 inches thick. Reaction ranges from very strongly acid to moderately acid in the $\mathrm{A}, \mathrm{E}, \mathrm{Bt}$, and Btg horizons and from strongly acid to slightly acid in the Cg horizon.

The A or Ap horizon has hue of 10YR, value of 3 to 5 , and chroma of 1 to 4 . Where value is 3 or less, the horizon is less than 7 inches thick. The horizon is sand, fine sand, loamy fine sand, or loamy sand.

The E horizon, where present, has hue of 10 YR or 2.5 Y , value of 4 to 6 , and chroma of 1 to 4 . The texture is sand, fine sand, loamy fine sand, or loamy sand.

The Bt horizon has hue of 10 YR or 2.5 Y , value of 5 or 6 , and chroma of 3 to 6 ; or it has no dominant color and is mixed in shades of red, yellow, brown, and gray. It has few to many redoximorphic features in shades of red, yellow, brown, or gray. The texture is sandy clay or clay.

The Btg horizon has hue of 10 YR or 2.5 Y , value of 5 or 6 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of red, brown, or yellow. The texture is sandy clay or clay.

The BCg horizon, where present, has the same range in color and texture as the Btg horizon.

The Cg horizon has hue of 10 YR or 2.5 Y , value of 5 or 6 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of red, brown, or yellow. The texture is sandy clay loam, sandy clay, or clay.

## Fluvaquents

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Clayey marine and fluvial sediments

Drainage class: Poorly drained
Permeability class: Slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Fluvaquents

## Associated Soils

The Fluvaquents are commonly associated on the landscape with Bigbee, Clara, Eunola, Garcon, Pedro Variant, and Surrency soils.

- The Bigbee soils are sandy throughout and are excessively drained.
- The Clara soils are sandy throughout and have a weakly expressed spodic horizon.
- The Eunola soils have a fine-loamy subsoil and are moderately well drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Fluvaquents in area of Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded; about 1.8 miles east of County Road 241 ; $\mathrm{NW}^{1 / 4} \mathrm{SE}^{1 / 4}$ sec. 26, T. 6 S., R. 18 E.; Worthington Spring USGS 7.5-minute quadrangle; lat. 29 degrees, 57 minutes, 45 seconds north and long. 82 degrees, 55 minutes, 53 seconds west.

A-0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; slightly acid; abrupt wavy boundary.
Cg1-6 to 11 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; strongly acid; abrupt wavy boundary.
Cg2-11 to 31 inches; light brownish gray (10YR 6/2) fine sand; weak fine granular structure; very friable; slightly acid; abrupt wavy boundary.
Cg3-31 to 40 inches; 50 percent yellowish brown (10YR 5/6) and 50 percent gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; very firm; slightly alkaline; gradual wavy boundary.
Cg4-40 to 80 inches; white (10YR 8/1) sandy clay loam; massive; moderately alkaline.

## Range in Characteristics

The thickness of the solum ranges from 12 to more than 80 inches. Reaction ranges from very strongly acid to slightly acid in the A horizon, from strongly acid to moderately alkaline in the upper part of the Cg horizon, and from slightly acid to moderately alkaline in the lower part of the $\mathrm{C}, \mathrm{Cg}$, or 2 C horizon.

The A horizon has hue of 10YR, value of 2 to 5 , and chroma of 1 to 3 . The number of iron accumulations in shades of brown or olive ranges from none to many. The texture is clay loam, loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand.

The E horizon, where present, has hue of 10YR, value of 4 to 6 , and chroma of 1 or 2. The texture is loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand.

The upper part of the Cg horizon has hue of 10 YR to 5 Y , value of 4 to 8 , and chroma of 1 or 2 ; is neutral in hue and has value of 4 to 7 ; or has no dominant color and is multicolored in shades of brown, yellow, olive, and gray. It has few to many redoximorphic features in shades of brown, yellow, olive, and gray. The content of fine concretions of
calcium carbonate or fragments of shells ranges from 0 to 10 percent, by volume. The upper part of the Cg horizon is sandy clay loam, sandy clay, clay loam, or clay.

The lower part of the $\mathrm{C}, \mathrm{Cg}$, or 2C horizon, below a depth of 11 inches, has a range in color similar to that of the upper part of the Cg horizon. The texture is variable or stratified with sand or clay.

## Foxworth Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Broad uplands; side slopes
Parent material: Sandy marine or eolian sediments
Drainage class: Moderately well drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 8 percent
Taxonomic classification: Thermic, coated Typic Quartzipsamments

## Associated Soils

The Foxworth soils are commonly associated on the landscape with Alaga, Albany, Chipley, Falmouth, and Hurricane soils.

- The Alaga soils are somewhat excessively drained.
- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Chipley soils are somewhat poorly drained.
- The Falmouth soils have surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are somewhat poorly drained.
- The Hurricane soils have a spodic horizon below a depth of 50 inches and are somewhat poorly drained.


## Typical Pedon

Foxworth fine sand, in an area of Chipley-Foxworth-Albany complex, 0 to 5 percent slopes; about 970 feet north and 2,300 feet west of $\mathrm{SE}^{1 / 4} \mathrm{sec}$. 15 , T. 2 S., R. 14 E.; Live Oak East, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 18 minutes, 31 seconds north and long. 82 degrees, 54 minutes, 5 seconds west.

Ap-0 to 11 inches; very dark gray (10YR $3 / 1$ ) fine sand; weak fine granular structure; common fine roots; strongly acid; clear smooth boundary.
C1-11 to 35 inches; brown (10YR 5/3) fine sand; single grain; loose; common fine roots; strongly acid; gradual wavy boundary.
C2-35 to 46 inches; light yellowish brown (10YR 6/4) fine sand; single grain; loose; common medium roots; strongly acid; gradual smooth boundary.
C3-46 to 54 inches; yellow (10YR 7/6) fine sand; single grain; loose; common medium roots; few fine distinct yellow (10YR 7/8) masses of iron accumulation; common medium distinct very pale brown (10YR $8 / 2$ ) areas of iron depletion; strongly acid; gradual wavy boundary.
Cg1-54 to 62 inches; very pale brown (10YR 8/2) fine sand; single grain; loose; common fine roots; many medium distinct very pale brown (10YR 7/4) and common medium distinct yellow (10YR 6/8) masses of iron accumulation; strongly acid; clear smooth boundary.
Cg2-62 to 67 inches; very pale brown (10YR 8/2) fine sand; single grain; loose; common fine roots; few fine distinct very pale brown (10YR 7/3) masses of iron accumulation; strongly acid; gradual wavy boundary.

Cg3-67 to 80 inches; very pale brown (10YR 8/2) fine sand; single grain; loose; strongly acid; gradual wavy boundary.

## Range in Characteristics

The combined thickness of the sandy layers is more than 80 inches. Reaction ranges from very strongly acid to slightly acid throughout.

The A or Ap horizon has hue of 7.5 YR to 2.5 Y , value of 3 to 5 , and chroma of 1 to 4. The texture is sand or fine sand.

The upper part of the $C$ horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 8 , and chroma of 3 to 8 . It has few to many splotches or pockets of uncoated sand grains that are not indicative of wetness. The texture is sand or fine sand.

The lower part of the $C$ horizon has hue of 7.5 YR or 10YR, value of 5 to 8 , and chroma of 3 to 6 . It has few to many redoximorphic features in shades of brown, yellow, gray, and red. Depth to redoximorphic features is commonly 45 to 60 inches but ranges from 40 to 72 inches. The lower part of the C horizon has few to many uncoated sand grains. The texture is sand or fine sand.

The Cg horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of brown, red, and yellow and few to many uncoated sand grains. The texture is sand or fine sand.

## Garcon Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Lower Coastal Plain
Geomorphic setting: Broad flats; low terraces
Parent material: Sandy and loamy marine sediments
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Loamy, siliceous, active, thermic Aquic Arenic Hapludults

## Associated Soils

The Garcon soils are commonly associated on the landscape with Albany, Bigbee, Clara, Eunola, Meggett, Otela, Ousley, and Pedro Variant soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Bigbee soils are sandy throughout and are excessively drained.
- The Clara soils are sandy throughout, have a weakly expressed spodic horizon, and are poorly drained.
- The Eunola soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are moderately well drained.
- The Meggett soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are poorly drained.
- The Otela soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Ousley soils are sandy throughout and are somewhat poorly drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.


## Typical Pedon

Garcon fine sand, in an area of Garcon-Eunola complex, 2 to 5 percent slopes, occasionally flooded; about 500 feet north and 700 feet east of a trail road; about

1,700 feet north and 1,000 feet east of the southwest corner of sec. 34, T. 7 S., R. 14 E.; Hatchbend, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 49 minutes, 38 seconds north and long. 82 degrees, 54 minutes, 20 seconds west.

A-0 to 7 inches; dark gray (10YR 4/1) fine sand; weak fine granular structure; very friable; strongly acid; clear wavy boundary.
E1-7 to 19 inches; brown (10YR 5/3) fine sand; single grain; loose; strongly acid; gradual wavy boundary.
E2-19 to 26 inches; very pale brown (10YR 7/4) fine sand; single grain; loose; very strongly acid; gradual wavy boundary.
Bt-26 to 40 inches; brownish yellow (10YR 6/6) sandy clay loam; moderate medium subangular blocky structure; friable; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) areas of iron depletion; strongly acid; gradual wavy boundary.
Btg-40 to 51 inches; light brownish gray (10YR 6/2) sandy loam; moderate medium subangular blocky structure; friable; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
BCg-51 to 60 inches; very pale brown (10YR 8/2) loamy fine sand; weak medium granular structure; very friable; common medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Cg-60 to 80 inches; very pale brown (10YR 8/2) fine sand; single grain; loose; common medium faint light gray (10YR 7/2) areas of iron depletion; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 45 to 60 inches. Reaction ranges from extremely acid to strongly acid throughout, except where lime has been applied. The A or Ap horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 or 2 . The texture is loamy fine sand, loamy sand, fine sand, or sand.

The E horizon has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 3 to 6 . The number of redoximorphic features in shades of brown, yellow, and gray ranges from none to common and generally increases with depth. The texture is loamy fine sand, loamy sand, fine sand, or sand.

The Bt horizon, where present, has hue of 7.5 YR or 10YR, value of 5 to 7 , and chroma of 3 to 6 . It has few or common redoximorphic features in shades of gray, brown, red, or yellow. The texture is sandy loam, fine sandy loam, or sandy clay loam.

The Btg horizon has hue of 10 YR , value of 5 or 6 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of brown, yellow, or red. The texture is sandy loam, fine sandy loam, or sandy clay loam.

The BCg horizon, where present, has the same range in color as the Cg horizon. The texture is loamy fine sand, loamy sand, fine sandy loam, or sandy loam.

The C horizon, where present, has hue of 5 YR to 10 YR , value of 5 to 8 , and chroma of 3 to 8 ; or it has no dominant color and is variegated in shades of red, yellow, gray, and brown. It has few to many redoximorphic features in shades of red, brown, yellow, and gray. The texture is sand or fine sand.

The Cg horizon has hue of 5 YR to 10 YR , value of 5 to 8 , and chroma of 1 or 2 . It has common or many redoximorphic features in shades of red, brown, yellow, and gray. The texture is sand or fine sand.

## Hurricane Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Lower Coastal Plain
Geomorphic setting: Uplands
Parent material: Sandy marine deposits

Drainage class: Somewhat poorly drained
Permeability class: Moderately rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Sandy, siliceous, thermic Oxyaquic Alorthods

## Associated Soils

The Hurricane soils are commonly associated on the landscape with Albany, Boulogne, Chipley, Foxworth, and Leon soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Boulogne and Leon soils have a spodic horizon at a depth of less than 30 inches and are poorly drained.
- The Chipley soils are sandy throughout.
- The Foxworth soils are sandy throughout and are moderately well drained.


## Typical Pedon

Hurricane fine sand, 0 to 5 percent slopes; 1.1 miles south of County Road 340 and 4.2 miles east of U.S. Highway 129; about 2,400 feet south and 1,850 feet west of the northeast corner of sec. 22, T. 8 S., R. 15 E.; lat. 29 degrees, 46 minutes, 27 seconds north and long. 88 degrees, 47 minutes, 48 seconds west.

Ap-0 to 6 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; very friable; many fine, medium, and large roots; very strongly acid; clear wavy boundary.
E1-6 to 20 inches; light yellowish brown (10YR 6/4) fine sand; single grain; loose; many fine, medium, and large roots; common medium distinct black (10YR 2/1) charcoal fragments; white (10YR 8/2) streaks and splotches; very strongly acid; gradual wavy boundary.
E2-20 to 29 inches; pale brown (10YR 6/3) fine sand; common medium distnct brownish yellow (10YR 6/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; single grain; loose; very strongly acid; clear wavy boundary.
Eg1-29 to 65 inches; light gray (10YR 7/2) fine sand; common medium distinct yellowish brown (10YR $5 / 6$ and $5 / 8$ ) masses of iron accumulation; single grain; loose; few medium and fine roots; very strongly acid; gradual wavy boundary.
Eg2—65 to 72 inches; light brownish gray (2.5Y 6/2) sand; single grain; loose; extremely acid; clear wavy boundary.
Bh-72 to 80 inches; dark reddish brown (5YR 3/2) fine sand; weak fine granular structure; very friable; extremely acid.

## Range in Characteristics

The solum is 60 inches thick or more. Depth to a spodic horizon ranges from 51 to 79 inches. Reaction ranges from extremely acid to moderately acid throughout.

The A or Ap horizon has hue of 10 YR or 2.5 Y , value of 3 to 5 , and chroma of 1 to 3. The texture is sand or fine sand.

The E horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 3 to 8 . The texture is sand or fine sand.

The Eg horizon, where present, has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of yellow and brown ranges from none to common.

The Bh horizon has hue of $5 Y R$ to $10 Y R$, value of 2 to 5 , and chroma of 4 or less. Sand grains are well coated with organic matter. The texture is sand, fine sand, or loamy fine sand.

## Ichetucknee Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Karst on uplands
Parent material: Sandy and clayey marine deposits overlying limestone
Drainage class: Somewhat poorly drained
Permeability class: Very Slow
Soil depth class: Deep to limestone bedrock
Shrink-swell potential: Moderate
Slope: 2 to 8 percent
Taxonomic classification: Fine, mixed, active, thermic Albaquultic Hapludalfs

## Associated Soils

The Ichetucknee soils are commonly associated on the landscape with Blanton, Bonneau, Boulogne, Chiefland, Otela, and Surrency soils.

- The Blanton and Otela soils are very deep, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and are moderately well drained.
- The Bonneau soils are very deep, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are well drained.
- The Boulogne soils are very deep, have a spodic horizon, and are poorly drained.
- The Chiefland soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, are moderately deep to limestone bedrock, and are well drained.
- The Surrency soils are very deep; have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Ichetucknee fine sand, in an area of Otela-Chiefland-Ichetucknee complex, 0 to 5 percent slopes; about 0.75 mile southeast of the intersection of Florida Highways 247 and 240, about 0.50 mile south of Florida Highway 240, and 50 feet east of Mary Road; $\mathrm{NE}^{1 / 4} \mathrm{SE}^{1 / 4}$ sec. 14, T. 5 S., R. 15 E.; O'Brien SE, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 3 minutes, 11 seconds north and long. 82 degrees, 47 minutes, 10 seconds west.

Ap-0 to 5 inches; gray (10YR 5/1) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; very strongly acid; gradual wavy boundary.
E-5 to 13 inches; light gray (10YR 7/2) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine roots; common medium faint very pale brown (10YR 7/4) masses of iron accumulation; strongly acid; abrupt wavy boundary.
Bt1-13 to 39 inches; pale brown (10YR 6/3) clay; moderate medium subangular blocky structure; very firm, moderately sticky and moderately plastic; few faint clay films on faces of peds; common fine roots; few fine faint gray (10YR 6/1) areas of iron depletion; common fine distinct brownish yellow (10YR 6/6) and many fine prominent red (2.5YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary.
Bt2—39 to 55 inches; yellowish red (5YR 5/6) clay; strong medium subangular blocky structure; very firm, very sticky and very plastic; common faint clay films on faces of peds; slightly acid; abrupt irregular boundary.
R—55 to 80 inches; very pale brown (10YR 8/2), soft limestone; about 40 percent, by volume, hard limestone boulders; solution holes filled with clay comprise about 10 percent of the pedon; strongly alkaline.

## Range in Characteristics

The thickness of the solum over limestone ranges from 40 to 60 inches. Reaction is very strongly acid or strongly acid in the A and E horizons, is strongly acid or moderately acid in the upper part of the Bt horizon, and ranges from moderately acid to neutral in the lower part of the Bt horizon.

The A or Ap horizon has hue of 10YR, value of 3 to 5 , and chroma of 1 or 2 . The texture is sand, fine sand, or loamy fine sand.

The E horizon has hue of 10YR, value of 4 to 7 , and chroma of 2 to 4 . The number of redoximorphic feature in shades of brown, yellow, and gray ranges from none to common. The texture is sand, loamy fine sand, or fine sand.

The upper part of the Bt horizon has hue of 5YR to 10YR, value of 5 to 7 , and chroma of 3 to 6 . It has few to many redoximorphic features in shades of gray, brown, yellow, or red. The texture is sandy clay or clay.

The lower part of the Bt horizon has hue of 5 YR to 10 YR , value of 5 to 7 , and chroma of 1 to 6 ; or it has no dominant color and is variegated in shades of gray, brown, yellow, and red. The lower part of the Bt horizon has few to many redoximorphic features in shades of brown, yellow, red, or gray. In some pedons, it has small nodules and fragments of limestone. The texture is sandy clay or clay.

The R layer is composed of soft limestone that is rippable by power equipment. It is interspersed with fragments of hard limestone. It has few to many solution holes up to 30 inches in diameter. The holes are filled with clay and extend to a depth of 75 inches or more.

## Leon Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Gulf Coastal Plain
Geomorphic setting: Upland flats
Parent material: Sandy marine sediments
Drainage class: Poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Aeric Alaquods

## Associated Soils

The Leon soils are commonly associated on the landscape with Clara, Hurricane, Pottsburg, and Surrency soils.

- The Clara soils have a weakly expressed spodic horizon.
- The Hurricane soils have a spodic horizon below a depth of 50 inches and are somewhat poorly drained.
- The Pottsburg soils have a spodic horizon below a depth of 50 inches.
- The Surrency soils have a thick, dark surface layer; do not have a spodic horizon; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Leon fine sand; about 500 feet north of a trail road and 300 feet east of a trail road; about 500 feet north and 3,500 feet east of the southwest corner of sec. 27, T. 5 S., R. 10 E.; Day SE, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 0 minutes, 57 seconds north and long. 83 degrees, 18 minutes, 34 seconds west.

Ap-0 to 4 inches; fine sand, black (10YR 2/1) rubbed; weak fine granular structure; very friable; common fine roots; extremely acid; clear wavy boundary.
E-4 to 10 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; common fine roots; strongly acid; clear wavy boundary.
$\mathrm{Bh}-10$ to 17 inches; dark reddish brown (5YR 2/2) fine sand; weak fine subangular blocky structure; friable; common fine roots; few fine distinct black (10YR 2/1) organic matter accumulations; many distinct dark brown (10YR 3/3) organic matter depletions; very strongly acid; clear wavy boundary.
$E^{\prime} 1-17$ to 24 inches; brown (10YR 5/3) fine sand; weak fine granular structure; very friable; common medium roots; common medium prominent black (5YR 2.5/1) organic matter accumulations; many medium distinct dark brown (10YR 3/3) organic matter depletions; strongly acid; gradual wavy boundary.
E'2-24 to 44 inches; light gray (10YR 7/2) fine sand; single grain; loose; common fine roots; strongly acid; gradual wavy boundary.
E'3-44 to 63 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose; many distinct dark brown (10YR 3/3) stains of organic matter on faces of peds; strongly acid; abrupt wavy boundary.
B'h-63 to 80 inches; very dark brown (10YR 2/2) fine sand; weak fine subangular blocky structure; very friable; common medium distinct yellowish brown (10YR $5 / 4$ ) organic matter depletions; strongly acid.

## Range in Characteristics

The Bh horizon is within a depth of 30 inches. Reaction typically ranges from extremely acid to slightly acid throughout. In tidal areas, however, reaction ranges from very strongly acid to moderately alkaline throughout.

The A or Ap horizon has hue of 7.5 YR or 10YR, value of 2 to 4 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 to 4 . When dry, this horizon has a salt-andpepper appearance due to mixing of organic matter and white sand grains. The texture is sand, fine sand, mucky fine sand, mucky sand, or muck.

The E horizon has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 5 to 8 . The number of redoximorphic features and streaks in shades of black or gray ranges from none to common. The texture is sand or fine sand.

The Bh horizon has hue of 5 YR to 10 YR, value of 2 to 4 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 2 to 4 . This horizon burns white on ignition. The number of vertical or horizontal streaks or pockets of sand or areas of iron depletion in shades of gray ranges from none to common. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E' horizon, where present, has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 to 3 . The number of streaks and masses of iron accumulation in shades of brown ranges from none to common. The texture is sand or fine sand.

The B'h horizon, where present, has a range in color and texture similar to that of the Bh horizon. The $\mathrm{B}^{\prime} h$ horizon is below the BE or $\mathrm{E}^{\prime}$ horizons.

The C horizon, where present, has of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 to 6 . The texture is sand or fine sand.

## Lynchburg Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands
Parent material: Marine sediments
Drainage class: Somewhat poorly drained
Permeability class: Moderate

Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults

## Associated Soils

The Lynchburg soils are commonly associated on the landscape with Blanton, Bonneau, Mascotte, and Padlock soils.

- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Mascotte soils have a spodic horizon and are poorly drained.
- The Padlock soils have a clayey subsoil and are moderately well drained.


## Typical Pedon

Lynchburg loamy fine sand, in an area of Blanton-Lynchburg-Bonneau complex, 0 to 5 percent slopes; about 0.5 mile east of County Road 149 and 0.25 mile north of State Road 149A; SW¼NE¹⁄4 sec. 8, T. 2 N., R. 5 E.; Monticello, Florida, USGS 7.5minute quadrangle; lat. 30 degrees, 35 minutes, 17 seconds north and long. 89 degrees, 50 minutes, 46 seconds west.

Ap-0 to 7 inches; very dark grayish brown (10YR 3/2) loamy fine sand; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; abrupt smooth boundary.
A-7 to 9 inches; dark gray (10YR 4/1) loamy fine sand; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; clear wavy boundary.
E-9 to 17 inches; light gray (10YR 7/2) loamy fine sand; weak fine granular structure; very friable; common fine and medium roots; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bt-17 to 23 inches; pale brown (10YR 6/3) sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky and moderately plastic; common fine and medium roots; common coarse prominent strong brown (7.5YR $5 / 8$ ) masses of iron accumulation; few medium faint light gray (10YR $7 / 2$ ) areas of iron depletion; very strongly acid; gradual wavy boundary.
Btg-23 to 61 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable, moderately sticky and moderately plastic; many medium and coarse prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.
BCg-61 to 80 inches; 25 percent light brownish gray (10YR 6/2), 30 percent yellowish brown (10YR 5/6), and 45 light reddish brown (5YR 6/3) sandy clay loam; massive; moderately sticky and moderately plastic; common fine roots; the areas of yellowish brown and light reddish brown are iron accumulations; the areas light brownish gray are iron depletions; very strongly acid.

## Range in Characteristics

The solum is more than 60 inches thick. Reaction ranges from extremely acid to strongly acid throughout.

The A and Ap horizons have hue of $10 Y R$ or 2.5 Y , value of 2 to 4 , and chroma of 2 or less; or they are neutral in hue and have value of 2 to 5 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The $E$ horizon has hue of 10 YR or 2.5 Y , value of 4 to 7 , and chroma of 1 to 3 . The
number of redoximorphic features in shades of red, yellow, brown, or gray ranges from none to common. The texture is fine sand, loamy sand, or loamy fine sand.

The Bt horizon has hue of 10 YR or 2.5 Y , value of 5 or 6 , and chroma of 3 to 8 . The number of redoximorphic features in shade of red, yellow, or brown and areas of iron depletion in shades of brown, yellow, olive, or gray ranges from none to common. The texture is dominantly sandy clay loam but ranges to sandy loam, fine sandy loam, loam, and clay loam.

The Btg horizon has hue of 10 YR or 2.5 Y , value of 4 to 7 , and chroma of 2 or less. It has few to many redoximorphic features in shades of gray, yellow, brown, or red. The texture is dominantly sandy clay loam but includes fine sandy loam and, in some pedons, is sandy clay or clay below a depth of 40 inches.

The BCg horizon has hue of 10 YR to 5 Y , value of 4 to 7 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 4 to 7 . The number of redoximorphic features in shade of red, yellow, brown, and gray ranges from none to common. The texture is sandy loam, fine sandy loam, sandy clay loam, loam, clay loam, sandy clay, or clay.

## Mascotte Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats
Parent material: Sandy and loamy marine sediments
Drainage class: Poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy over loamy, siliceous, active, thermic Ultic Alaquods

## Associated Soils

The Mascotte soils are commonly associated on the landscape with Lynchburg, Pantego, Plummer, Pottsburg, Sapelo, and Surrency soils.

- The Lynchburg soils have a fine-loamy subsoil, do not have a spodic horizon, and are somewhat poorly drained.
- The Pantego soils have a fine-loamy subsoil, do not have a spodic horizon, and are very poorly drained.
- The Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Pottsburg soils have a spodic horizon at a depth of more than 50 inches.
- The Sapelo soils have an argillic horizon below a depth of 37 inches.
- The Surrency soils have a thick, dark surface layer; do not have a spodic horizon; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Mascotte fine sand, in an area of Mascotte-Sapelo complex; about 1 mile south of U.S. Highway 90 and 3 miles west of the Baker County line; sec. 34, T. 3 S., R. 18 E.; Olustee, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 11 minutes, 8 seconds north and long. 82 degrees, 29 minutes, 46 seconds west.

Ap-0 to 6 inches; fine sand, black (10YR 2/1) rubbed; weak fine granular structure; very friable, nonsticky and nonplastic; common fine roots; many clean sand grains; extremely acid; gradual wavy boundary.
E-6 to 15 inches; gray (10YR 6/1) fine sand; single grain; loose, nonsticky and
nonplastic; common fine roots; common medium distinct dark gray (10YR 4/1) organic matter accumulations; very strongly acid; abrupt wavy boundary.
Bh1-15 to 19 inches; black (10YR 2/1) fine sand; weak fine subangular blocky structure; friable, nonsticky and nonplastic; common fine and medium roots; few clean sand grains; many distinct very dark gray (10YR 3/1) organic matter stains and depletions on faces of peds; very strongly acid; gradual wavy boundary.
Bh2-19 to 25 inches; dark reddish brown (5YR 2/2) fine sand; weak fine subangular blocky structure; friable, nonsticky and nonplastic; common fine roots; many distinct dark brown (10YR 3/3) organic matter depletions on surfaces of root channels; very strongly acid; gradual wavy boundary.
$E^{\prime}-25$ to 35 inches; yellowish brown (10YR 5/4) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine roots; common medium distinct black (10YR 2/1) organic matter accumulations; very strongly acid; abrupt smooth boundary.
B'h—35 to 37 inches; black ( $\mathrm{N} 2.5 / 0$ ) fine sand; weak medium granular structure; friable, nonsticky and nonplastic; common fine roots; very strongly acid; abrupt smooth boundary.
Btg1-37 to 55 inches; light brownish gray (10YR 6/2) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky and moderately plastic; common fine roots; common coarse prominent yellowish brown (10YR 5/6) and common medium distinct brownish yellow (10YR 6/6) redoximorphic accumulations; very strongly acid; gradual wavy boundary.
Btg2—55 to 67 inches; gray (10YR 6/1) fine sandy loam; weak medium subangular blocky structure; friable, nonsticky and nonplastic; few coarse distinct reddish yellow (5YR 6/6) redoximorphic accumulations; very strongly acid; gradual wavy boundary.
Cg-67 to 80 inches; light olive gray ( $5 \mathrm{Y} 6 / 2$ ) sandy loam; weak fine granular structure; very friable, slightly sticky and moderately plastic; common medium prominent reddish yellow (7.5YR 6/8) redoximorphic accumulations; very strongly acid.

## Range in Characteristics

The depth to the Bh horizon ranges from 10 to 29 inches, and the depth to the Btg horizon ranges from 24 to 40 inches. Reaction ranges from extremely acid to strongly acid in the $\mathrm{A}, \mathrm{E}, \mathrm{Bh}$, and Btg horizons and from extremely acid to moderately acid in the Cg horizon.

The A or Ap horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 . The texture is sand or fine sand.

The E horizon has hue of 10YR, value of 5 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of yellow, gray, and brown ranges from none to common. The texture is fine sand or sand.

The Bh and B'h horizons have hue of 5 YR to 10YR, value of 2 to 4 , and chroma of 1 to 4; or they are neutral in hue and have value of 2.5 . In some pedons, they have few or common weakly cemented bodies with the same range in color. The number of organic matter depletions in shades of gray ranges from none to many. The texture is sand, fine sand, or loamy fine sand.

The E' horizon, where present, has hue of 10YR, value of 5 to 7 , and chroma of 2 to 4 . The number of redoximorphic features in shades of brown, black, and gray ranges from none to common.

The Btg horizon has hue of 10 YR or 2.5 Y , value of 4 to 7 , and chroma of 1 or 2 . It has common or many redoximorphic features in shades of red, brown, and yellow. The texture is fine sandy loam, sandy loam, or sandy clay loam.

Some pedons have a Cg horizon within a depth of 80 inches. Where present, it has hue of 10 YR to 5 Y , value of 6 , and chroma of 1 or 2 . The number of redoximorphic
features in shades of brown, yellow, and red ranges from none to common. The texture is fine sand or sand.

## Meadowbrook Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Sandy and loamy marine sediments
Drainage class: Poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Grossarenic
Endoaqualfs

## Associated Soils

The Meadowbrook soils are commonly associated on the landscape with Clara, Sapelo, and Surrency soils.

- The Clara soils are sandy throughout and have a weakly expressed spodic horizon.
- The Sapelo soils have a spodic horizon.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Meadowbrook fine sand, in an area of Clara and Meadowbrook soils, frequently flooded; about 300 feet east of a trail road and 1,700 feet south of a graded road; about 700 feet south and 2,300 feet east of the northwest corner of sec. 36, T. 7 S., R. 10 E.; Clara, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 50 minutes, 2 seconds north and long. 83 degrees, 16 minutes, 57 seconds west.
A-0 to 7 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable; common fine roots; moderately acid; gradual wavy boundary.
Eg1-7 to 14 inches; light gray (10YR 7/1) sand; single grain; loose; common fine roots; common medium distinct very dark gray (10YR 3/1) organic matter accumulations; slightly acid; gradual wavy boundary.
Eg2-14 to 31 inches; 50 percent brown (10YR $5 / 3$ ) and 50 percent very pale brown (10YR 7/3) fine sand; single grain; loose; common fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; the areas of brown and very pale brown are iron accumulations; slightly acid; clear wavy boundary.
Eg3-31 to 50 inches; light gray (10YR 7/1) fine sand; single grain; loose; common fine roots; many distinct dark brown (10YR $3 / 3$ ) organic stains on faces of peds; slightly acid; gradual wavy boundary.
Eg4-50 to 64 inches; brown (10YR 5/3) fine sand; single grain; loose; common fine roots; slightly acid; abrupt irregular boundary.
Btg-64 to 80 inches; gray (10YR 5/1) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; slightly acid.

## Range in Characteristics

The thickness of the solum ranges from 50 to more than 80 inches. Reaction ranges from extremely acid to neutral in the A horizon, from extremely acid to
moderately alkaline in the Eg horizon, and from very strongly acid to moderately alkaline in the Btg horizon.

The A horizon has hue of 10 YR , value of 2 to 5 , and chroma of 1 or 2 . Where value is 3 or less, the horizon is 7 inches thick or less. The horizon is sand, fine sand, or the mucky analogs of those textures.

The E horizon has hue of 10 YR to 5 GY , value of 4 to 8 , and chroma of 1 to 3 . It has few or common redoximorphic features in shades of gray, yellow, and brown. The texture is sand or fine sand.

The Bw horizon, where present, has hue of 7.5 YR or 10 YR , value of 4 to 7 , and chroma of 3 to 8 . The texture is sand or fine sand.

The Btg horizon has hue of 10 YR to 5 GY , value of 4 to 7 , and chroma of 2 or less; or it is neutral in hue and has value of 4 to 7 . It has few to many redoximorphic features in shades of gray, yellow, brown, and red. The texture is dominantly sandy loam, fine sandy loam, or sandy clay loam. In some pedons, however, the upper part of the horizon has a layer of loamy sand or loamy fine sand.

## Meggett Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains
Parent material: Clayey marine and fluvial sediments
Drainage class: Poorly drained
Permeability class: Slow
Soil depth class: Very deep
Shrink-swell potential: High
Slope: 0 to 2 percent
Taxonomic classification: Fine, mixed, active, thermic Typic Albaqualfs

## Associated Soils

The Meggett soils are commonly associated on the landscape with Bigbee, Clara, Eunola, Garcon, Pedro Variant, and Surrency soils.

- The Bigbee soils are sandy throughout and are excessively drained.
- The Clara soils are sandy throughout and have a weakly expressed spodic horizon.
- The Eunola soils have a fine-loamy subsoil and are moderately well drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Meggett fine sand, in an area of Bigbee-Garcon-Meggett complex, occasionally flooded; about 2.2 miles south of County Road 344 and 500 feet east of U.S. Highway 129; about 250 feet north and 1,400 feet west of the southeast corner of sec. 5, T. 10 S., R. 15 E.; Fourmile Lake, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 38 minutes, 16 seconds north and long. 82 degrees, 49 minutes, 37 seconds west.

A-0 to 4 inches; very dark brown (10YR 2/2) fine sand; weak fine granular structure; very friable; slightly acid; clear wavy boundary.
E-4 to 11 inches; light brownish gray (10YR 6/2) fine sand; weak fine granular structure; very friable; common fine faint brown (10YR $5 / 3$ ) and pale brown
(10YR 6/3) masses of iron accumulation; common fine distinct grayish brown (10YR $5 / 2$ ) areas of iron depletion; strongly acid; abrupt wavy boundary.
Btg1-11 to 31 inches; light brownish gray (10YR 6/2) sandy clay; moderate medium subangular blocky structure; firm; many coarse prominent red (2.5YR 4/8) and many medium prominent strong brown (7.5YR $5 / 8$ ) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg2-31 to 40 inches; 50 percent yellowish brown (10YR 5/6) and 50 percent gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; very firm; the areas of yellowish brown are iron accumulations; the areas of gray are iron depletions; strongly acid; gradual wavy boundary.
BCg-40 to 80 inches; light gray (10YR 7/1) sandy clay loam; massive; friable; many medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; moderately alkaline.

## Range in Characteristics

The thickness of the solum ranges from 40 to more than 80 inches. Reaction ranges from very strongly acid to slightly acid in the A horizon, from strongly acid to moderately alkaline in the upper part of the B horizon, and from slightly acid to moderately alkaline in the lower part of the B horizon and in the BCg and C horizons.

The A horizon has hue of 10YR, value of 2 to 5 , and chroma of 1 to 3 . The number of iron accumulations in shades of brown or olive ranges from none to many. The horizon is clay loam, loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand.

The E horizon, where present, has hue of 10YR, value of 4 to 6 , and chroma of 1 or 2. The texture is loam, fine sandy loam, sandy loam, loamy sand, loamy fine sand, fine sand, or sand.

The upper part of the Btg horizon has hue of 10 YR to 5 Y , value of 4 to 7 , and chroma of 1 or 2 ; is neutral in hue and has value of 4 to 7 ; or has no dominant color and is multicolored in shades of brown, yellow, olive, and gray. It has few to many redoximorphic features in shades of brown, yellow, olive, and gray. The content of fine concretions of calcium carbonate or fragments of shells ranges from 0 to 10 percent, by volume. The upper part of the Btg horizon is sandy clay loam, sandy clay, clay loam, or clay.

The lower part of the Btg horizon has the same range in color and features as the upper part of the horizon. The texture is clay loam, sandy clay, or clay.

The BCg horizon, where present, has hue of 10 YR to $5 B G$, value of 4 to 7 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 4 to 7 . The content of fine concretions of calcium carbonate or fragments of shell ranges from 0 to 35 percent, by volume. The BCg horizon is clay, sandy clay, or sandy clay loam.

Some pedons have a C, Cg, or 2C horizon below a depth of 50 inches. The horizon has a range in color similar to that of the Btg horizon. The texture is variable or stratified with sand or clay.

## Ocilla Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Low uplands and stream terraces
Parent material: Sandy and loamy marine sediments
Drainage class: Somewhat poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent

Taxonomic classification: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

## Associated Soils

The Ocilla soils are commonly associated on the landscape with Albany, Blanton, Bonneau, Cantey, and Falmouth soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils are well drained.
- The Cantey soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are poorly drained.
- The Falmouth soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and have a clayey subsoil.


## Typical Pedon

Ocilla fine sand, in an area of Ocilla-Albany-Blanton complex, 0 to 5 percent slopes; about 0.5 mile south of Interstate 10 , about 2.5 miles west of the intersection of Florida Highway 53 and Interstate 10; sec. 14, T. 1 S., R. 9 E.; Madison, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 23 minutes, 42 seconds north and long. 83 degrees, 23 minutes, 54 seconds west.

A-0 to 3 inches; grayish brown (10YR 5/2) fine sand; weak fine granular structure; very friable; many fine and very fine roots; very strongly acid; clear smooth boundary.
E1-3 to 13 inches; light yellowish brown (10YR 6/4) sand; weak fine granular structure; very friable; many very fine and fine roots; strongly acid; gradual wavy boundary.
E2-13 to 19 inches; very pale brown (10YR 7/4) sand; weak fine granular structure; very friable; common fine roots; strongly acid; gradual wavy boundary.
E3-19 to 24 inches; very pale brown (10YR 7/4) sand; weak fine granular structure; very friable; many fine prominent reddish yellow ( $7.5 \mathrm{YR} 6 / 8$ ) masses of iron accumulation; common medium distinct white (10YR 8/1) areas of iron depletion; very strongly acid; clear wavy boundary.
E4-24 to 29 inches; light yellowish brown (2.5Y 6/4) loamy sand; weak fine subangular blocky structure; friable; common medium distinct brownish yellow (10YR 6/8) masses of iron accumulation; common fine distinct light gray (10YR $7 / 2$ ) areas of iron depletion; strongly acid; gradual wavy boundary.
Bt-29 to 34 inches; light yellowish brown (2.5Y 6/4) fine sandy loam; weak fine subangular blocky structure; friable; sand grains coated and bridged with clay; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; common course distinct light gray (10YR 7/2) areas of iron depletion; very strongly acid; gradual wavy boundary.
Btg-34 to 80 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; firm; 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

The thickness of the solum ranges from 60 to more than 80 inches. Reaction is very strongly acid or strongly acid, except the surface soil in areas where lime has been applied.

The A or Ap horizon has hue of 10 YR or 2.5 Y , value of 3 to 5 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 3 to 5 . Where value is 3 , the horizon is less than 7 inches thick. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E horizon has hue of 10 YR to 5 Y , value of 4 to 8 , and chroma of 1 to 4 . The texture is sand, fine sand, loamy fine sand, or loamy sand.

The BE horizon, where present, has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 3 to 8 . The texture is loamy sand or loamy fine sand.

The upper part of the Bt horizon has hue of 7.5 YR to 2.5 Y , value of 5 to 7 , and chroma of 2 to 8 . The texture is fine sandy loam, sandy loam, or sandy clay loam.

The lower part of the Bt horizon is multicolored in shades of gray, yellow, brown, and red. The matrix has hue of 10 YR to 5 Y , value of 5 to 8 , and chroma of 1 to 8 . The lower part of the Bt horizon has few to many redoximorphic features in shades of gray, red, or brown. The texture is dominantly sandy clay loam but includes sandy loam, fine sandy loam, and sandy clay. The content of plinthite ranges from 0 to about 3 percent, by volume.

The $\mathrm{Btg}, \mathrm{BC}$, and BC g horizons, where present, have a range in color and range in texture comparable to the Bt 2 and B t 3 horizons.

The C horizon, where present, has the same range in color as the lower part of the Bt horizon. The C horizon is sandy loam, sandy clay loam, sandy clay, or clay.

## Olustee Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Lower Coastal Plain
Geomorphic setting: Flats
Parent material: Sandy and loamy marine sediments
Drainage class: Poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Ultic Alaquods

## Associated Soils

The Olustee soils are commonly associated on the landscape with Pamlico, Plummer, Pottsburg, Sapelo, and Surrency soils.

- The Pamlico soils are organic soils and are very poorly drained.
- The Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and do not have a spodic horizon.
- The Pottsburg soils have a spodic horizon at a depth of more than 50 inches.
- The Sapelo soils have a substantial E horizon between the A and Bh horizons and have an argillic horizon below a depth of 37 inches.
- The Surrency soils have a thick, dark surface layer; do not have a Bh horizon; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Olustee fine sand, in an area of Pamlico-Olustee-Pottsburg complex, depressional; in Osceola National Forest about 150 feet north of Forest Service Road 263 and 1.50 miles east of U.S. Highway 441; sec. 15, T. 2 S., R. 17 E.; Deep Creek, Florida, USGS 7.5 -minute quadrangle; lat. 30 degrees, 19 minutes, 5 seconds north and long. 82 degrees, 35 minutes, 58 seconds west.

A1-0 to 5 inches; black (10YR 2/1) fine sand; moderate medium granular structure; very friable; common fine roots; extremely acid; gradual smooth boundary.
A2-5 to 18 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; common fine roots; common medium faint black (10YR 2/1) organic matter accumulations; very strongly acid; clear smooth boundary.
Bh-18 to 23 inches; dark reddish brown (5YR 3/2) fine sand; weak fine subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR 3/3) organic stains on all faces of peds; very strongly acid; gradual smooth boundary.
Eg-23 to 37 inches; light gray (10YR 7/2) fine sand; single grain; loose; common fine roots; common medium distinct dark brown (10YR $3 / 3$ ) organic matter accumulations; many distinct dark brown (10YR $3 / 3$ ) organic stains on all faces of peds; very strongly acid; clear wavy boundary.
Btg-37 to 63 inches; light brownish gray (10YR 6/2) fine sandy loam; weak fine subangular blocky structure; friable; common fine roots; common medium distinct strong brown (7.5YR 5/6) and yellowish brown (10YR 5/6) organic matter accumulations; very strongly acid; gradual wavy boundary.
Cg-63 to 80 inches; light brownish gray (10YR 6/2) loamy fine sand; weak fine subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; common fine distinct yellowish brown (10YR 5/6) organic matter accumulations; very strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 25 to 40 inches. Reaction ranges from extremely acid to strongly acid throughout.

The A horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E horizon, where present, is less than 2 inches thick. It has hue of 10YR, value of 4 to 7 , and chroma of 1 or 2 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The Bh horizon has hue of 5 YR or 7.5 YR , value of 2 or 3 , and chroma of 1 to 4 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The BE horizon, where present, has hue of 7.5 YR or 10 YR , value of 4 to 6 , and chroma of 3 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The Eg horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of yellow, brown, or black. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The Btg horizon has hue of 10 YR to 5 Y , value of 4 to 7 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of yellow, brown, and red. The texture is sandy loam, fine sandy loam, or sandy clay loam.

The Cg horizon has hue of 10 YR to 5 Y , value of 4 to 7 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of gray, red, or brown. The texture ranges from sand to sandy clay. In some pedons, the horizon contain lenses and pockets of material coarser or finer than the matrix.

## Osier Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains and low stream terraces
Parent material: Sandy alluvium
Drainage class: Poorly drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low

Slope: 0 to 2 percent
Taxonomic classification: Siliceous, thermic Typic Psammaquents

## Associated Soils

The Osier soils are commonly associated on the landscape with Bibb, Plummer, Pottsburg, and Surrency soils.

- The Bibb soils have a coarse-loamy control section.
- The Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Pottsburg soils have a spodic horizon.
- The Surrency soils have a thick, dark surface layer; have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches; and are very poorly drained.


## Typical Pedon

Osier sand, in an area of Osier-Bibb-Albany complex, frequently flooded; about 3,150 feet north and 3,080 feet west of southeast corner of sec. 18, T. 1 S., R. 17 E.; Benton, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 24 minutes, 1 second north and long. 82 degrees, 38 minutes, 50 seconds west.
A1-0 to 3 inches; very dark brown (10YR 2/2) sand; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary.
A2-3 to 8 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose; common fine roots; very strongly acid; diffuse smooth boundary.
Cg1-8 to 36 inches; light brownish gray (10YR 6/2) fine sand; massive; very friable; common fine roots; very strongly acid; diffuse smooth boundary.
Cg2-36 to 80 inches; light gray (10YR 7/2) fine sand; massive; very friable; common fine roots; very strongly acid.

## Range in Characteristics

The combined thickness of the sandy layers is 80 inches or more. Reaction ranges from extremely acid to moderately acid throughout the profile. The content of silt plus clay is 5 to 15 percent in the 10- to 40 -inch section.

The A horizon has hue of 10 YR or 2.5 Y , value of 2 to 5 , and chroma of 1 or 2 . Where value is 2 or 3 , the horizon is less than 10 inches thick. The texture is fine sandy loam, loamy fine sand, loamy sand, fine sand, or sand.

The C horizon has hue of 7.5 YR to 5 GY , value of 3 to 8 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 5 to 7 . The number of redoximorphic features in shades of brown, yellow, and gray ranges from none to common. The texture is loamy fine sand, loamy sand, fine sand, or sand and, in the lower part of the horizon, can include coarse sand. In most pedons, the horizon has thin strata of material ranging from sand to sandy loam.

In some pedons, the C horizon is underlain or interrupted by an Ab horizon. The Ab horizon has hue of 10 YR to 5 Y , value of 2 or 3 , and chroma of 1 or 2 . The texture is fine sand, loamy fine sand, or loamy sand.

## Otela Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Broad uplands
Geomorphic setting: Karst
Parent material: Sandy and loamy marine sediments over limestone
Drainage class: Moderately well drained
Permeability class: Slow

Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs

## Associated Soils

The Otela soils are commonly associated on the landscape with Chiefland, Garcon, Ichetucknee, and Padlock soils.

- The Chiefland soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, are moderately deep to limestone bedrock, and are well drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.
- The Ichetucknee soils are deep to limestone bedrock and are somewhat poorly drained.
- The Padlock soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and have a clayey subsoil.


## Typical Pedon

Otela fine sand, in an area of Otela-Chiefland-Ichetucknee complex, 0 to 5 percent slopes; about 1,500 feet north of Florida Highway 53 and 1,000 feet east of a graded road; about 2,000 feet north and 3,500 feet east of the southwest corner of sec. 34, T. 4 S., R. 11 E.; Mayo, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 5 minutes, 21 seconds north and long. 83 degrees, 12 minutes, 44 seconds west.

Ap-0 to 6 inches; dark grayish brown (10YR 4/2) fine sand; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary. E1-6 to 21 inches; brown (10YR 5/3) fine sand; single grain; loose; common fine roots; very strongly acid; gradual wavy boundary.
E2-21 to 31 inches; pale brown (10YR 6/3) fine sand; single grain; loose; common fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; few medium prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
E3-31 to 40 inches; very pale brown (10YR 7/4) fine sand; single grain; loose; common fine roots; many distinct dark brown (10YR 3/3) organic stains on faces of peds; strongly acid; gradual wavy boundary.
E4-40 to 60 inches; yellowish brown (10YR 5/8) fine sand; single grain; loose; common fine roots; strongly acid; abrupt wavy boundary.
Bt1-60 to 65 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR $3 / 3$ ) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bt2-65 to 75 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; common fine roots; many distinct dark brown (10YR $3 / 3$ ) masses of iron accumulation; common medium distinct white (10YR 8/1) areas of iron depletion; strongly acid; gradual wavy boundary.
Btg-75 to 80 inches; light gray (10YR 7/2) sandy clay loam; moderate medium subangular blocky structure; friable; common medium distinct yellowish brown (10YR $5 / 8$ ) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum and depth to limestone bedrock range from 60 to more than 80 inches. Reaction ranges from very strongly acid to neutral in the A and E
horizons, from extremely acid to slightly alkaline in the upper part of the Bt horizon, and from extremely acid to moderately alkaline in the lower part of the Bt horizon.

The A or Ap horizon has hue of 10YR, value of 3 to 6 , and chroma of 1 to 3 . The texture is sand or fine sand.

The E horizon has hue of 10YR, value of 5 to 8 , and chroma of 1 to 8 . The number of redoximorphic features in shades of brown or yellow ranges from none to common. In some pedons, the horizon has few to many pockets of clean sand grains. The E horizon is fine sand or sand.

The Bt horizon has hue of 10 YR , value of 5 to 8 , and chroma of 3 to 8 . It has few to many redoximorphic features in shades of gray, yellow, brown, or red. Gray iron depletions, which are indicative of wetness, are within the upper 10 inches of the horizon. The texture is sandy loam, fine sandy loam, or sandy clay loam.

The Btg horizon, where present, has hue of 10 YR to 5 Y , value of 5 to 7 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 5 to 7 . The number of redoximorphic features in shades of gray, red, yellow, or brown ranges from none to common. In some pedons, the lower part of this horizon has about 5 percent gravelor cobble-sized fragments of limestone or chert. The Btg horizon is sandy loam, sandy clay loam, or sandy clay. Some pedons have a clayey 2Btg horizon.

Some pedons have a BC horizon below a depth of 60 inches. Where present, it has hue of 10 YR , value of 3 to 8 , and chroma of 3 to 8 . The texture is fine sand or loamy fine sand.

The Cr horizon, where present, has hue of 10YR, value of 6 to 8 , and chroma of 1 to 4. It is composed of soft, weathered, fractured limestone that can be dug with a spade. It has very firm to extremely firm rupture resistance and low to high excavation difficulty. It typically contains soft carbonate accumulations and few to many hard fragments of limestone or chert. It is highly irregular and complex. It is interspersed with solution holes that are 4 to 12 inches in diameter, variable within short distances, and filled with sandy loam to sandy clay textured soil material.

The R layer, where present, consists of hard, unweathered limestone. It has slightly rigid to very rigid rupture resistance and very high to extremely high excavation difficulty. In some areas it has solution holes.

## Ousley Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flood plains and terraces
Parent material: Sandy fluvial sediments
Drainage class: Somewhat poorly drained
Permeability class: Rapid
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Thermic, uncoated Aquic Quartzipsamments

## Associated Soils

The Ousley soils are commonly associated on the landscape with Bigbee, Blanton, and Garcon soils.

- The Bigbee soils are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Garcon soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.


## Typical Pedon

Ousley fine sand, in an area of Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded; about 1.8 miles east of County Road 241; $\mathrm{NW}^{1 / 4 S E}{ }^{1 / 4}$ sec. 26, T. 6 S., R. 18 E.; Worthington Spring USGS 7.5-minute quadrangle; lat. 29 degrees, 57 minutes, 45 seconds north and long. 82 degrees, 55 minutes, 53 seconds west.
A-0 to 4 inches; dark grayish brown (10YR 4/2) fine sand; weak fine granular structure; very friable; few fine roots; very strongly acid; abrupt wavy boundary.
C1-4 to 24 inches; brown (10YR 5/3) fine sand; single grain; loose; few fine roots; very strongly acid; clear smooth boundary.
C2-24 to 40 inches; very pale brown (10YR 7/3) fine sand; single grain; loose; few fine roots; very strongly acid; clear smooth boundary.
Cg1-40 to 55 inches; light brownish gray (10YR 6/2) sand; single grain; loose; few fine roots; very strongly acid; clear smooth boundary.
Cg2—55 to 80 inches; light gray (10YR 7/2) sand; single grain; loose; very strongly acid.

## Range in Characteristics

The combined thickness of the sandy horizons is 80 inches or more. Reaction is very strongly acid or strongly acid throughout the profile.

The A horizon has hue of 10 YR or 2.5 Y , value of 2 to 6 , and chroma of 1 or 2 . The thickness of the horizon ranges from 4 to 8 inches.

The C horizon has hue of 10 YR , value of 4 to 7 , and chroma of 3 or 4 . The texture is fine sand or sand.

The Cg horizon, where present, has hue of 10YR, value of 6 or 7 , and chroma 2 or less. The number of redoximorphic features in shades of gray, brown, or yellow ranges from none to common. The texture is fine sand or sand.

## Padlock Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands
Parent material: Clayey marine deposits
Drainage class: Moderately well drained
Permeability class: Slow
Soil depth class: Very deep
Shrink-swell potential: Moderate
Slope: 0 to 8 percent
Taxonomic classification: Fine, mixed, active, thermic Aquic Paleudults

## Associated Soils

The Padlock soils are commonly associated on the landscape with Alpin, Blanton, Bonneau, Chiefland, Falmouth, Lynchburg, Otela, and Troup soils.

- The Alpin soils are sandy throughout and are excessively drained.
- The Blanton and Otela soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Chiefland soils are moderately deep to limestone bedrock, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are well drained.
- The Falmouth soils have smectitic mineralogy and are somewhat poorly drained.
- The Lynchburg soils have a fine-loamy subsoil and are somewhat poorly drained.
- The Troup soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat excessively drained.


## Typical Pedon

Padlock fine sand, in an area of Blanton-Padlock-Alpin complex, 0 to 5 percent slopes; about 2,500 feet south and 2,100 feet east of the northwest corner of sec. 17., T. 3 S., R. 14 E.; McAlpin, Florida, USGS Live Oak East 7.5-minute quadrangle; lat. 30 degrees, 13 minutes, 31 seconds north and long. 82 degrees, 56 minutes, 23 seconds west.

Ap-0 to 5 inches; very dark grayish brown (10YR 3/2) fine sand; weak medium granular structure; very friable, nonsticky and nonplastic; common fine roots; strongly acid; clear smooth boundary.
Bt1-5 to 13 inches; yellowish red (5YR 5/8) sandy clay; moderate fine subangular blocky structure; friable, slightly sticky and slightly plastic; common fine roots; common faint clay films on faces of peds; very strongly acid; clear wavy boundary.
Bt2-13 to 17 inches; strong brown (7.5YR 4/6) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky and moderately plastic; common fine roots; common distinct clay films on faces of peds; few fine prominent dark yellowish brown (10YR 4/6) and few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Bt3-17 to 22 inches; dark yellowish brown (10YR 4/6) sandy clay; moderate coarse subangular blocky structure; firm, very sticky and very plastic; few fine roots; sand grains coated and bridged with clay; common distinct clay films on faces of peds; many medium prominent yellowish brown (10YR $5 / 6$ ) masses of iron accumulation; many medium prominent pale brown (10YR 6/3) areas of iron depletion; very strongly acid; gradual wavy boundary.
Btg1-22 to 51 inches; light brownish gray (10YR 6/2) sandy clay; moderate coarse subangular blocky structure; firm, very sticky and very plastic; few fine roots; common faint clay films on faces of peds; few fine distinct strong brown (7.5YR $5 / 6$ ) and many medium prominent dark brown (10YR $3 / 3$ ) masses of iron accumulation; few faint light gray (10YR 7/2) areas of iron depletion; very strongly acid; gradual wavy boundary.
Btg2-51 to 63 inches; light brownish gray ( $2.5 \mathrm{Y} 6 / 2$ ) sandy clay; weak coarse subangular blocky structure; firm, very sticky and very plastic; common faint clay films on faces of peds; common medium prominent strong brown (7.5YR 5/6) and dark brown (10YR 3/3) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg3-63 to 80 inches; light gray (5Y 7/1) sandy clay; weak coarse subangular blocky structure; firm, very sticky and very plastic; common faint clay films on faces of peds; few medium prominent dark brown ( $7.5 \mathrm{YR} 3 / 3$ ) and many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid.

## Range in Characteristics

The solum is more than 60 inches thick. Reaction ranges from very strongly acid to moderately acid throughout, except where lime has been applied.

The A or Ap horizon has hue of 10 YR or 2.5 Y , value of 2 to 4 , and chroma of 1 to 4. Where value is 3 or less, the horizon is less than 7 inches thick. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The E horizon, where present, has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 2 to 6 . The texture is sand, fine sand, loamy sand, or loamy fine sand.

The upper part of the Bt horizon has hue of 5 YR or 7.5 YR , value of 4 to 7 , and chroma of 3 to 8 . The number of redoximorphic features in shades of red, yellow, and brown ranges from none to common. The texture is sandy clay or clay.

The lower part of the Bt horizon has hue of 7.5 YR or 10YR, value of 4 to 7 , and chroma of 3 to 8 . It has few to many redoximorphic features in shades of red, yellow, brown, and, below 20 inches, gray. The texture is sandy clay or clay.

The Btg horizon has hue of 10 YR or 2.5 Y , value of 4 to 7 , and chroma of 1 or 2 . It has few to many masses of iron accumulation in shades of red, yellow, or brown. It has the same range in texture as the Bt horizon.

The BCg horizon, where present, has the same range in color as the Btg horizon. The texture is sandy clay or clay.

The Cg horizon, where present, has hue of 10 YR to 5 Y , value of 5 to 7 , and chroma of 1 or 2. It has few to many masses of iron accumulation in shades of red, yellow, or brown. The texture is sandy clay loam, sandy clay, or clay.

## Pamlico Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Depressions
Parent material: Decomposed organic material overlying sandy mineral sediments Drainage class: Very poorly
Permeability class: Slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 1 percent
Taxonomic classification: Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists

## Associated Soils

The Pamlico soils are commonly associated on the landscape with Olustee, Pantego, Pottsburg, and Surrency soils.

- The Olustee soils are mineral throughout, have a spodic horizon, and are poorly drained.
- The Pantego soils are mineral throughout and have a thick, dark surface layer.
- The Pottsburg soils are mineral throughout, have a spodic horizon, and are poorly drained.
- The Surrency soils are mineral throughout; have a thick, dark surface layer; and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches.


## Typical Pedon

Pamlico muck, in an area of Pamlico-Olustee-Pottsburg complex, depressional; about 1,000 feet north and 1,000 feet west of a trail road; about 1,200 feet north and 500 feet west of the southeast corner of sec. 29, T. 5 S., R. 10 E.; Day SE, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 0 minutes, 53 seconds north and long. 83 degrees, 20 minutes, 2 seconds west.
Oa1-0 to 3 inches; muck, black (7.5YR 2.5/1) rubbed; weak coarse granular structure; very friable; common fine roots; extremely acid; gradual wavy boundary. Oa2-3 to 22 inches; muck, black (10YR 2/1) rubbed; massive; friable; common fine roots; extremely acid; clear wavy boundary.
Cg-22 to 80 inches; light brownish gray (10YR 6/2) fine sand; single grain; loose;
common fine roots; many distinct dark brown (10YR 3/3) organic stains on sand grains; very strongly acid.

## Range in Characteristics

The depth of organic material over a mineral substratum ranges from 16 to 51 inches. Reaction is extremely acid in the organic layers and ranges from extremely acid to strongly acid in the underlying mineral layers.

The Oa horizon has hue of 7.5 YR or 10 YR , value of 2 to 3 , and chroma of 2 ; or it is neutral in hue and has value of 2 or 3 . The content of fiber is 30 percent or less before rubbing and less than 10 percent after rubbing.

The Cg horizon has hue of 10YR, value of 3 to 6 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 to 6 . The texture is sand or fine sand.

## Pantego Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats and depressions
Parent material: Loamy marine sediments
Drainage class: Very poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Fine-loamy, siliceous, semiactive, thermic Umbric Paleaquults

## Associated Soils

The Pantego soils are commonly associated on the landscape with Blanton, Bonneau, Mascotte, Pamlico, Sapelo, and Surrency soils.

- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Mascotte and Sapelo soils have a spodic horizon and are poorly drained.
- The Pamlico soils have organic layers with a combined thickness of 16 to 51 inches over dominantly sandy material.
- The Surrency soils have a thick, dark surface layer and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches.


## Typical Pedon

Pantego fine sandy loam; about 200 feet north and 600 feet east of a trail road; about 1,500 feet north and 1,500 feet east of the southwest corner of sec. 21, T. 6 S., R. 12 E.; Mallory Swamp NW, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 56 minutes, 34 seconds north and long. 83 degrees, 8 minutes, 1 second west.

A—0 to 10 inches; black (10YR 2/1) fine sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; gradual wavy boundary.
Eg-10 to 14 inches; light brownish gray (10YR 6/2) fine sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary.
Btg1-14 to 18 inches; light gray (10YR 7/2) sandy clay loam; moderate medium subangular blocky structure; friable; common fine roots; few medium prominent
brownish yellow (10YR 6/8) and few fine prominent brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg2—18 to 45 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; many medium prominent brownish yellow (10YR 6/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg3—45 to 80 inches; grayish brown (10YR 5/2) sandy clay; moderate medium subangular blocky structure; firm, slightly sticky and slightly plastic; many distinct white (10YR 8/1) sand coatings in pore linings; strongly acid.

## Range in Characteristics

The solum is more than 60 inches thick. Reaction ranges from extremely acid to strongly acid throughout, except where lime has been applied.

The A or Ap horizon has hue of 10 YR or 2.5 Y , value of 2 or 3 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 or 3 . The texture is loamy fine sand, loamy sand, fine sandy loam, sandy loam, loam, or the mucky analogs of those textures.

The Eg horizon, where present, has hue of 10 YR or 2.5 Y , value of 4 to 6 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 4 to 6 . The texture is loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam.

The BEg horizon, where present, has hue of 10 YR or 2.5 Y , value of 4 to 6 , and chroma of 1 or 2 . The texture is loam, sandy loam, fine sandy loam, or sandy clay loam.

The Btg horizon has hue of 10 YR to 5 Y , value of 4 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of brown and yellow ranges from none to common. The texture is sandy clay loam, sandy loam, sandy clay, clay loam, or fine sandy loam.

The BCg horizon, where present, has hue of 10 YR or 2.5 Y , value of 4 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of brown and yellow ranges from none to common. The texture is sandy clay loam, clay loam, sandy clay, sandy loam, or fine sandy loam.

The Cg horizon, where present, has hue of 10 YR or 2.5 Y , value of 5 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of brown and yellow ranges from none to common. The texture is sandy clay loam, clay loam, sandy loam, fine sandy loam, loamy fine sand, fine sand, loamy sand, or sand.

## Pedro Variant Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Karst
Parent material: Sandy and loamy marine sediments over limestone
Drainage class: Well drained
Permeability class: Moderately rapid
Soil depth class: Shallow to limestone bedrock
Shrink-swell potential: Low
Slope: 0 to 5 percent
Taxonomic classification: Loamy, siliceous, superactive, hyperthermic, shallow Typic Hapludalfs

## Associated Soils

The Pedro Variant soils are commonly associated on the landscape with Alpin, Bigbee, Blanton, Chiefland, Garcon, Meggett, and Plummer soils.

- The Alpin and Bigbee soils are sandy throughout and are excessively drained.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Chiefland soils are moderately deep to limestone bedrock and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches.
- The Garcon soils are very deep, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are somewhat poorly drained.
- The Meggett soils are very deep, have a clayey subsoil, and are poorly drained.
- The Plummer soils are very deep, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and are poorly drained.


## Typical Pedon

Pedro Variant fine sand, in an area of Chiefland-Pedro Variant complex, occasionally flooded; about 0.75 mile west of U.S. Highway 27, about 0.65 mile north of County Highway 138, and 25 feet east of a subdivision trail; sec. 19, T. 7 S., R. 17 E.; High Springs SW, Florida, USGS 7.5-minute quadrangles; lat. 29 degrees, 51 minutes, 40 seconds north and long. 82 degrees, 39 minutes, 11 seconds west.

Ap-0 to 3 inches; gray (10YR 5/1) fine sand; weak fine granular structure; very friable; common fine and medium roots; slightly acid; clear wavy boundary.
E-3 to 8 inches; brown (10YR 5/3) fine sand; single grain; loose; common fine and medium roots; neutral; clear irregular boundary.
Bt-8 to 11 inches; dark brown (10YR 4/4) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; neutral; abrupt irregular boundary.
$2 \mathrm{Cr}-11$ to 14 inches; very pale brown (10YR 8/2), soft weathered limestone; moderately alkaline; gradual irregular boundary.
2R-14 inches; hard, fractured limestone bedrock.

## Range in Characteristics

The thickness of the solum and the depth to soft, weathered limestone ranges from 6 to 20 inches. Most pedons have solution holes that are up to 60 inches deep. Reaction ranges from strongly acid to slightly acid in the surface horizon and from slightly acid to slightly alkaline in the subsoil.

The A or Ap horizon has hue of 10YR, value of 4 to 7 , and chroma of 1 to 3 . The texture is sand or fine sand.

The E horizon has hue of 10YR, value of 5 to 7 , and chroma of 3 or 4 . The texture is sand or fine sand.

The Bt horizon has hue of 7.5 YR or 10YR, value of 4 to 6 , and chroma of 4 to 8 . The texture is sandy clay loam, fine sandy loam, or sandy loam. The content of soft and hard limestone fragments ranges from 0 to 10 percent, by volume.

The 2Cr horizon is weathered limestone. It has hue of 10YR, value of 7 or 8 , and chroma of 1 to 4 . It is commonly mixed with fragments of hard limestone. In some pedons it has boulders.

This pedon is a variant of the Pedro series because it is thermic rather than hyperthermic and because it has hard limestone bedrock at a depth of less than 20 inches. Other than these differences, the properties of the Pedro Variant are within the concepts of the Pedro series.

## Plummer Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats, depressions, and flood plains

Parent material: Marine sediments
Drainage class: Poorly drained and very poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

## Associated Soils

The Plummer soils are commonly associated on the landscape with Albany, Cantey, Mascotte, Olustee, Osier, Pedro Variant, Sapelo, Surrency, and Wampee soils.

- The Albany soils are somewhat poorly drained.
- The Cantey soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and have a clayey subsoil.
- The Mascotte, Olustee, and Sapelo soils have a spodic horizon.
- The Osier soils are sandy throughout.
- The Pedro Variant soils are shallow to limestone bedrock and are well drained.
- The Surrency soils have a dark surface layer, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and are very poorly drained.
- The Wampee soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are somewhat poorly drained.


## Typical Pedon

Plummer fine sand, approximately 1,200 feet north and 600 feet west of the southeast corner of sec. 28, T. 5 S., R. 12 E.; Mayo SE, Florida, USGS 7.5-minute quadrangles; lat. 30 degrees, 0 minutes, 56 seconds north and long. 83 degrees, 6 minutes, 60 seconds west.
Ap-0 to 7 inches; fine sand, black (10YR 2/1) rubbed; weak medium granular structure; common fine and medium roots; very strongly acid; clear wavy boundary.
Eg1-7 to 14 inches; grayish brown (10YR 5/2) fine sand; single grain; loose; common fine and medium roots; very strongly acid; clear wavy boundary.
Eg2—14 to 22 inches; gray (10YR 6/1) fine sand; single grain; loose; common fine and medium roots; strongly acid; gradual wavy boundary.
Eg3—22 to 55 inches; light gray (10YR 7/1) fine sand; single grain; loose; common medium roots; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; abrupt wavy boundary.
Btg—55 to 80 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky and slightly plastic; many distinct white (10YR 8/1) sand coatings on pore surfaces; medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 72 to more than 100 inches. Reaction ranges from extremely acid to moderately acid throughout, except where lime has been applied.

Some pedons in depressional areas have an O horizon that is 8 inches thick or less. Where present, this O horizon has hue of 10 YR to 5 Y , value of 2 to 4 , and chroma of 1 or 2 . The texture is muck.

The A or Ap horizon has hue of 10 YR to 5 Y , value of 2 to 4 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 to 4 . If the value is 2 or 3 , the horizon is
less than 8 inches thick. The texture is sand, fine sand, loamy fine sand, or loamy sand.

The Eg horizon has hue of 10 YR to 5 Y , value of 5 to 8 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 5 to 8 . The number of redoximorphic features in shades of yellow and brown ranges from none to common. The texture is sand, fine sand, or loamy fine sand.

The Btg horizon has hue of 10 YR to 5 Y , value of 5 to 7 , and chroma of 1 or 2 . The number of redoximorphic features in shades of yellow and brown ranges from none to common. The texture is sandy loam, fine sandy loam, or sandy clay loam.

## Pottsburg Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Lower costal plain
Geomorphic setting: Flats
Parent material: Marine sediments
Drainage class: Poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Grossarenic Alaquods

## Associated Soils

The Pottsburg soils are commonly associated on the landscape with Albany, Leon, Mascotte, Olustee, Osier, Pamlico, and Sapelo soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Leon, Mascotte, Olustee, and Sapelo soils have a spodic horizon at a depth of less than 30 inches.
- The Osier soils are sandy throughout and do not have a spodic horizon.
- The Pamlico soils have organic material up to 51 inches thick over mineral layers and are very poorly drained.


## Typical Pedon

Pottsburg sand, in an area of Pamlico-Olustee-Pottsburg complex, depressional; about 3,100 feet north and 5,100 feet west of the southeast corner of sec. 5, T. 2 N., R. 12 E.; Octahatchee, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 35 minutes, 56 seconds north and long. 83 degrees, 8 minutes, 14 seconds west.

A—0 to 7 inches; very dark gray (10YR 3/1) sand; weak fine granular structure; very friable; common fine roots; extremely acid; clear wavy boundary.
E1-7 to 19 inches; dark grayish brown (10YR 4/2) sand; single grain; loose; common fine roots; common medium distinct gray (10YR 6/1) organic matter depletions; common medium distinct yellowish brown (10YR $5 / 6$ ) masses of iron accumulation; very strongly acid; clear wavy boundary.
E2-19 to 30 inches; light brownish gray (10YR 6/2) sand; single grain; loose; common fine roots; many distinct dark brown (10YR $3 / 3$ ) organic stains on the sand grains; common medium prominent strong brown (7.5YR 5/6) organic matter accumulations; very strongly acid; clear wavy boundary.
E3-30 to 51 inches; light brownish gray (10YR 6/2) sand; single grain; loose; common fine roots; many distinct dark brown (10YR 3/3) organic stains on sand grains; common medium distinct dark reddish brown (5YR 3/2) organic matter accumulations; many coarse prominent very pale brown (10YR 8/2) organic
matter depletions; many medium distinct yellowish brown (10YR 5/6) organic matter accumulations; very strongly acid; clear wavy boundary.
EB-51 to 65 inches; grayish brown (10YR 5/2) loamy sand; single grain; loose; very strongly acid; common fine roots; common medium faint dark grayish brown (10YR 4/2) organic matter accumulations; clear wavy boundary.
Bh-65 to 80 inches; dark reddish brown (5YR 3/2) sand; weak fine subangular blocky structure; friable; common fine roots; common coarse faint black (10YR $2 / 1$ ) organic matter accumulations; very strongly acid.

## Range in Characteristics

The solum is more than 60 inches thick. Reaction ranges from extremely acid to slightly acid in the A horizon and from extremely acid to moderately acid in the Bh horizon.

The A horizon has hue of 10YR, value of 2 to 5 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 to 5 . The texture is sand or fine sand.

The upper part of the E horizon has hue of 10YR or 2.5 Y , value of 4 to 7 , and chroma of 1 to 3 . The texture is sand or fine sand.

The lower part of the E horizon has hue of 7.5 YR to 2.5 Y , value of 4 to 8 , and chroma of 1 or 2 . The number of redoximorphic features in shades of brown, yellow, olive, red, or gray ranges from none to common. The texture is sand or fine sand.

The EB, BE, or E/B horizon, where present, has hue of 5 YR to 2.5 Y , value of 2 to 8 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 2 . The number of redoximorphic features in shades of red, yellow, olive, or gray ranges from none to common. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The Bh horizon has hue of 5 YR to 10 YR, value of 2 to 5 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 2 . The texture is sand, fine sand, loamy sand, or loamy fine sand. The sand grains are well coated with organic matter and are weakly cemented in some places.

## Sapelo Series

Major Land Resource Area: 138-North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Flats
Parent material: Marine sediments
Drainage class: Poorly drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 2 percent
Taxonomic classification: Sandy, siliceous, thermic Ultic Alaquods

## Associated Soils

The Sapelo soils are commonly associated on the landscape with Albany, Chipley, Mascotte, Meadowbrook, Olustee, Pantego, Plummer, and Pottsburg soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are somewhat poorly drained.
- The Chipley soils are sandy throughout and are somewhat poorly drained.
- The Mascotte soils have an argillic horizon within a depth of 37 inches.
- The Meadowbrook and Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Olustee soils do not have an E horizon and have a Btg horizon within a depth of 37 inches.
- The Pantego soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches and are very poorly drained.
- The Pottsburg soils have a spodic horizon below a depth of 50 inches.


## Typical Pedon

Sapelo fine sand (fig. 9), in an area of Sapelo-Mascotte-Plummer complex; about 2,000 feet north of County Road 355-A and 100 feet east of a trail road; about 2,700 feet north and 700 feet east of the southwest corner of sec. 31, T. 5 S., R. 12 E.; McAlpin, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 12 minutes, 45 seconds north and long. 82 degrees, 55 minutes, 8 seconds west.

A-0 to 10 inches; dark gray (10YR 4/1) fine sand; weak medium granular structure; very friable; common fine roots; very strongly acid; abrupt smooth boundary.
E-10 to 22 inches; light gray (10YR 7/1) fine sand; single grain; loose; common fine roots; very strongly acid; clear smooth boundary.
Bh1-22 to 23 inches; 50 percent dark reddish brown (5YR 3/2) and 50 percent black (5YR 2/1) fine sand; weak medium granular structure; friable; common fine roots; very strongly acid; clear smooth boundary.
Bh2-23 to 28 inches; reddish brown (5YR 4/4) fine sand; weak medium granular structure; friable; common fine roots; very strongly acid; gradual wavy boundary.
E'1-28 to 33 inches; yellowish brown (10YR 5/4) fine sand; weak medium granular structure; very friable; common fine roots; very strongly acid; gradual wavy boundary.
E'2-33 to 43 inches; light yellowish brown (2.5Y 6/4) fine sand; weak medium granular structure; very friable; common fine roots; very strongly acid; gradual wavy boundary.
E'3-43 to 54 inches; pale yellow (2.5Y 7/4) fine sand; weak medium granular structure; very friable; common fine roots; very strongly acid; gradual wavy boundary.
Btg1-54 to 74 inches; light brownish gray ( $2.5 \mathrm{Y} 6 / 2$ ) sandy loam; weak medium subangular blocky structure; friable, slightly sticky and moderately plastic; common fine roots; few medium and coarse distinct yellowish brown (10YR 5/4) and common medium prominent strong brown ( $7.5 \mathrm{YR} 5 / 8$ ) masses of iron accumulation; very strongly acid; gradual wavy boundary.
Btg2-74 to 80 inches; light brownish gray ( $2.5 \mathrm{Y} 6 / 2$ ) sandy loam; weak medium subangular blocky structure; friable; few medium distinct yellowish brown (10YR $5 / 6$ ) and few fine prominent strong brown (7.5YR $5 / 8$ ) masses of iron accumulation; very strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 60 to 90 inches. Reaction ranges from extremely acid to strongly acid throughout.

The A horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 . The texture is sand or fine sand.

The E horizon has hue of 10 YR or 2.5 Y , value of 5 to 8 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 5 to 8 . The texture is sand or fine sand.

The Bh horizon has hue of 2.5 YR to 10 YR , value of 2 to 4 , and chroma of 1 to 4 . The texture is sand, fine sand, or loamy fine sand.

The E' horizon has hue of 10 YR to 5 Y , value of 5 to 8 , and chroma of 1 to 4 . It has common or many redoximorphic features in shades of red, brown, or yellow. The texture is sand, loamy fine sand, or fine sand.

The Btg horizon has hue of 10 YR to 5 Y , value of 5 to 8 , and chroma of 1 or 2 . It has few to many redoximorphic accumulation in shades of red, yellow, and brown. In some pedons, it has lenses and pockets of sand and clay. The Btg horizon is sandy loam, loam, fine sandy loam, or sandy clay loam.


Figure 9.-Typical profile of Sapelo fine sand, in an area of Mascotte-Sapelo complex. Depth is marked in centimeters and meters.

## Surrency Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Lower Coastal Plain
Geomorphic setting: Flats, depressions, and swamps
Parent material: Marine and fluvial sediments
Drainage class: Very poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 1 percent
Taxonomic classification: Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults

## Associated Soils

The Surrency soils are commonly associated on the landscape with Cantey, Ichetucknee, Leon, Mascotte, Meadowbrook, Meggett, Olustee, Osier, Pamlico, Pantego, and Plummer soils.

- The Cantey soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are poorly drained.
- The Ichetucknee soils are deep to limestone bedrock and are somewhat poorly drained.
- The Leon, Mascotte, and Olustee soils have a spodic horizon and are poorly drained.
- The Meadowbrook and Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are poorly drained.
- The Meggett soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are poorly drained.
- The Osier soils are sandy throughout.
- The Pamlico soils have organic layers with a combined thickness of up to 51 inches.
- The Pantego soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches.


## Typical Pedon

Surrency fine sand, in an area of Surrency, Plummer, and Cantey soils, frequently flooded; about 1.25 miles north of Florida Highway S-242 and 300 feet east of Birley Road; sec. 17, T. 4 S., R. 16 E.; Lake City West, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 8 minutes, 19 seconds north and long. 82 degrees, 44 minutes, 1 second west.

A1-0 to 8 inches; black (10YR 2/1) fine sand; weak medium granular structure; very friable, nonsticky and nonplastic; common fine and medium roots; extremely acid; gradual wavy boundary.
A2—8 to 16 inches; very dark gray (10YR 3/1) fine sand; moderate medium granular structure; very friable, nonsticky and nonplastic; common fine and medium roots; extremely acid; clear wavy boundary.
Eg-16 to 38 inches; gray (10YR 6/1) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine and medium roots; very strongly acid; gradual smooth boundary.
Btg-38 to 80 inches; grayish brown (10YR 5/2) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky and slightly plastic; many distinct white (10YR 8/1) sand coatings on surfaces of pores; common coarse distinct yellowish brown (10YR 5/8) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 60 to 100 inches. Reaction ranges from extremely acid to strongly acid throughout, except where lime has been applied.

The A horizon has hue of 10 YR to 5 Y , value of 2 or 3 , and chroma of 1 or 2 ; or it is neutral in hue and has value of 2 or 3 . The texture is sand, fine sand, loamy sand, loamy fine sand, or the mucky analogs of those textures.

The Eg horizon has hue of 10YR, value of 5 to 7 , and chroma of 1 or 2 . The texture is loamy sand, loamy fine sand, fine sand, or sand.

The Btg horizon has hue of 10 YR , value of 5 or 6 , and chroma of 1 or 2 . It has few to many redoximorphic features in shades of gray, brown, and yellow. The texture is sandy loam, fine sandy loam, or sandy clay loam.

Some pedons have a Cg horizon below a depth of 65 inches. Where present, it has hue of 2.5 Y , value of 5 or 6 , and chroma of 1 . The number of redoximorphic features in shades of red, yellow, brown, and gray ranges from none to many. The texture ranges from loamy sand to sandy clay loam.

## Troup Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Uplands
Parent material: Sandy and loamy marine deposits
Drainage class: Somewhat excessively drained
Permeability class: Moderate
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 0 to 8 percent
Taxonomic classification: Loamy, kaolinitic, thermic Grossarenic Kandiudults

## Associated Soils

The Troup soils are commonly associated on the landscape with Alaga, Albany, Alpin, Blanton, Bonneau, and Padlock soils.

- The Alaga soils are sandy throughout.
- The Albany soils are somewhat poorly drained.
- The Alpin soils are sandy throughout, have lamellae, and are excessively drained.
- The Blanton soils have a subsoil that is more yellow than the subsoil of the Troup soils and are moderately well drained.
- The Bonneau soils have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches and are well drained.
- The Padlock soils have sandy surface and subsurface layers with a combined thickness of less than 20 inches, have a clayey subsoil, and are moderately well drained.


## Typical Pedon

Troup fine sand, 0 to 5 percent slopes; about 0.75 mile west of Florida Highway 245 and 50 feet north of Florida Highway 349; sec. 25, T. 5 S., R. 17 E.; Ellisville, Florida, USGS 7.5-minute quadrangle; lat. 30 degrees, 1 minute, 32 seconds north and long. 82 degrees, 34 minutes, 1 second west.

Ap-0 to 8 inches; dark brown (10YR $3 / 3$ ) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; common fine and medium roots; neutral; abrupt smooth boundary.
E1-8 to 38 inches; reddish yellow (7.5YR 6/6) loamy sand; single grain; loose,
nonsticky and nonplastic; common fine and medium roots; strongly acid; gradual wavy boundary.
E2—38 to 52 inches; strong brown (7.5YR 5/6) loamy sand; single grain; loose, nonsticky and nonplastic; common fine and medium roots; few medium distinct very pale brown (10YR 8/2) splotches and streaks of uncoated sand grains; moderately acid; gradual wavy boundary.
Bt1—52 to 58 inches; strong brown (7.5YR 5/6) fine sandy loam; weak fine granular structure; very friable, slightly sticky and slightly plastic; common medium roots; strongly acid; gradual wavy boundary.
Bt2—58 to 67 inches; yellowish red (5YR 4/6) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky and slightly plastic; many distinct white (10YR 8/1) sand coats on surfaces of pores; very strongly acid; gradual wavy boundary.
Bt3-67 to 80 inches; yellowish red (5YR 4/6) sandy clay loam; moderate fine subangular blocky structure; very friable, slightly sticky and slightly plastic; many distinct white (10YR 8/1) sand coats on surfaces of pores; few medium distinct brown (7.5YR 5/2) areas of iron depletion; strongly acid

## Range in Characteristics

The solum is more than 80 inches thick. Reaction ranges from very strongly acid to moderately acid in the A and E horizons, except where lime has been applied, and is very strongly acid or strongly acid in the BE and Bt horizons.

The A or Ap horizon has hue of 10YR, value of 3 to 5 , and chroma of 2 to 4 . The texture is sand, loamy sand, or fine sand.

The $E$ horizon has hue of 7.5 YR or 10 YR , value of 4 to 8 , and chroma of 3 to 8 . In most pedons it has few or common areas and splotches of uncoated sand grains. The $E$ horizon is loamy sand, fine sand, or sand.

The BE horizon, where present, has hue of 5 YR to 10 YR , value of 4 to 8 , and chroma of 3 to 8 . The texture is loamy sand or loamy fine sand.

The Bt horizon dominantly has hue of 2.5 YR or 5 YR , value of 4 or 5 , and chroma of 6 to 8 . In some pedons, however, it has hue of 7.5 YR or 10 YR , value of 5 to 7 , and chroma of 4 to 8 . The number of redoximorphic features in shades of brown ranges from none to common. The horizon has few to many silica-cemented nodules and concretions. The horizon is sandy loam, fine sandy loam, or sandy clay loam.

## Wampee Series

Major Land Resource Area: 138—North-Central Florida Ridge
Local physiographic area: Coastal Plain
Geomorphic setting: Terraces and low uplands
Parent material: Sandy and loamy marine sediments
Drainage class: Somewhat poorly drained
Permeability class: Moderately slow
Soil depth class: Very deep
Shrink-swell potential: Low
Slope: 5 to 15 percent
Taxonomic classification: Loamy, siliceous, active, thermic Aquic Arenic Hapludalfs

## Associated Soils

The Wampee soils are commonly associated on the landscape with Albany, Blanton, Bonneau, and Plummer soils.

- The Albany soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches.
- The Blanton soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are moderately well drained.
- The Bonneau soils are well drained.
- The Plummer soils have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches and are poorly drained.


## Typical Pedon

Wampee fine sand, in an area of Wampee-Blanton complex, 5 to 12 percent slopes; about 2,500 feet south and 200 feet east of a trail road; about 1,500 feet south and 1,000 feet east of the northwest corner of sec. 22, T. 6 S., R. 12 E.; Mallory Swamp NE, Florida, USGS 7.5-minute quadrangle; lat. 29 degrees, 57 minutes, 4 seconds north and long. 83 degrees, 7 minutes, 5 seconds west.

Ap-0 to 6 inches; very dark gray (10YR 3/1) fine sand; weak fine granular structure; very friable, nonsticky and nonplastic; many fine roots; moderately acid; clear wavy boundary.
AE-6 to 12 inches; dark grayish brown (10YR 4/2) fine sand; single grain; loose, nonsticky and nonplastic; common fine roots; strongly acid; gradual wavy boundary.
E1-12 to 21 inches; brown (10YR 5/3) fine sand; single grain; loose, nonsticky and nonplastic; common fine roots; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
E2-21 to 32 inches; light brownish gray (10YR 6/2) sand; single grain; loose, nonsticky and nonplastic; common fine roots; common medium prominent dark yellowish brown (10YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary.
Btg1-32 to 55 inches; gray (10YR 6/1) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky and slightly plastic; common fine roots; many distinct white (10YR 8/1) sand coats on surfaces of pores; about 2 percent, by volume, ironstone nodules; many coarse prominent dark yellowish brown (10YR 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btg2-55 to 80 inches; light gray (10YR 7/2) sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky and slightly plastic; many distinct white ( $10 \mathrm{YR} 8 / 1$ ) sand coats on surfaces of pores; many coarse prominent brown (7.5YR 5/4) and brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid.

## Range in Characteristics

The thickness of the solum ranges from 50 to more than 80 inches. Reaction ranges from very strongly acid to neutral in the A and AE horizons and from very strongly acid to slightly acid in the $\mathrm{E}, \mathrm{BE}, \mathrm{Btg}$, and Cg horizons.

The A or Ap horizon has hue of 10YR, value of 2 to 4 , and chroma of 1 or 2 . The content of coarse fragments, mainly ironstone nodules, quartz gravel, or weathered phosphatic limestone, ranges from 0 to 10 percent, by volume. The texture is sand, fine sand, loamy sand, or loamy fine sand.

The AE horizon, where present, has hue of 10YR, value of 4 or 5 , and chroma of 1 to 4. The content of coarse fragments, mainly ironstone nodules, quartz gravel, or weathered phosphatic limestone, ranges from 0 to 10 percent, by volume. The texture is sand or fine sand.

The E horizon has hue of 10YR, value of 4 to 7 , and chroma of 1 to 6 . The number of iron accumulations in shades of yellow or brown ranges from none to common. The content of coarse fragments, mainly ironstone nodules, quartz gravel, or weathered phosphatic limestone, ranges from 2 to 30 percent, by volume. The texture is sand or fine sand.

The upper part of the Btg or Bt horizon has hue of 10YR, value of 5 to 8 , and chroma of 1 to 4 ; or it is neutral in hue and has value of 5 to 8 . It has few or common redoximorphic features in shades of gray, yellow, or brown. The content of coarse fragments, mainly ironstone nodules, quartz gravel, or weathered phosphatic limestone, ranges from 2 to 30 percent, by volume. The texture is sandy clay loam or gravelly sandy clay loam.

The lower part of the Btg horizon has hue of 10YR, value of 5 to 8, and chroma of 1 or 2; or it is neutral in hue and has value of 5 to 8 . The number of redoximorphic features in shades of gray, yellow, red, or brown ranges from none to common. The content of coarse fragments ranges from 0 to 10 percent, by volume. The texture is sandy loam or sandy clay loam.

Some pedons have a Cg horizon that has a range in color similar to that of the Btg horizon. The texture ranges from loamy sand to clay.

## Formation of the Soils

In this section, the factors of soil formation are related to the soils in Suwannee County and the processes of horizon differentiation and the geology of the county are explained.

## Factors of Soil Formation

Soil forms through weathering and other processes that act on deposited or accumulated geologic material. The kind of soil that forms depends on the type of parent material; the climate under which soil material has existed since accumulation; the plant and animal life in and on the soil; the relief, or lay of the land; and the length of time that the forces of soil formation have acted on the soil material (Jenny, 1941).

The five soil-farming factors are interdependent; each modifies the effects of the others. Any one of the factors can have more influence than the others on the formation of a soil and can account for most of its properties. For example, if the parent material is only quartz sand, the soil generally has only weakly expressed horizons. In some areas, the effect of the parent material is modified greatly by the effects of the climate, relief, and plants and animals in and on the soil. As a soil forms, it is influenced by all five factors, but in places one factor can have a dominant effect. A modification or variation in any of the five factors results in a different kind of soil.

## Parent Material

The soils in Suwannee County formed mainly in marine deposits. These deposits were mainly quartz sand and contained varying amounts of clay and shell fragments. Clay is most abundant in the soils that formed in sediment on marine terraces and in lagoons. It is virtually absent on shoreline ridges where most of the deposits are sandy eolian material. Ocean currents transported the parent material. The ocean covered the survey area a number of times during the Pleistocene age.

The various kinds of parent material in the county differ somewhat from one another in mineral and chemical composition and in physical structure. The main physical differences, such as those between sand, silt, and clay, can be observed in the field. Other differences, such as mineral and chemical composition, are important to soil formation and affect the physical and chemical characteristics of the soils. Many differences among soils in the county reflect original differences in the parent material as it was laid down.

Some organic soils are located throughout the county. They formed in the partly decayed remains of wetland vegetation.

## Climate

Precipitation, temperature, humidity, and wind are the climatic forces that act on the parent material in Suwannee County. These forces directly impact soil formation. They also indirectly influence soil formation through their effects on plant and animal life.

The climate of Suwannee County is warm and humid. The Gulf of Mexico and the Atlantic Ocean have moderating effects on temperatures. Inland lakes also moderate temperatures but to a lesser extent. Temperatures vary only slightly in summer. In winter, they fluctuate widely, sometimes daily or for several days. Temperatures do not, however, stay below freezing long enough to freeze the soil. Rainfall averages about 54 inches per year. It often occurs as brief, heavy thunderstorms during the summer and as more moderate, lengthy rainfall with the passage of cold fronts in the winter.

Because of the warm climate and abundant rainfall, the rates of chemical and biological activity are high. Rainfall leaches many plant nutrients and thus lowers the fertility level of the soils. Over time, leaching also accounts for the translocation of clay and organic matter, resulting in a sandy surface layer and the formation of a spodic horizon, an argillic horizon, or both.

## Plants and Animals

Plants are the principal biological factor affecting soil formation in Suwannee County. Animals, bacteria, and fungi are also important. Plants and animals furnish organic matter to the soil. Through such biological processes as leaf drop and death, plants recycle nutrients from varying depths in the soil and deposit nutrients along with organic matter on the surface. Animals also process nutrients and organic matter deposited on the surface.

Soil structure, porosity, and reaction are affected by plants and animals. Tree roots and crayfish, earthworms, and other burrowing organisms commonly improve soil structure and porosity. The breakdown of plant materials commonly influences soil reaction. Pine trees reduce alkalinity in many areas in the county.

Microorganisms, such as bacteria and fungi, help to weather and break down minerals. They also help to recycle organic matter by breaking it down into more basic components and nutrients. Microorganisms generally are more numerous in the surface layer, and their quantity and diversity decrease with increasing depth. Earthworms and other burrowing or tunneling organisms mix soil material and influence its chemical composition.

Humans have influenced the formation of the soils by altering the vegetative community; by cultivating, draining, irrigating, mixing, removing, covering, and compacting the soil; by discharging wastes and chemicals; and by applying pesticides. Some of the effects of these activities are readily apparent; for example, erosion and improved drainage. Others effects become apparent only after a long time.

## Relief

Relief influences soil formation by affecting drainage, erosion, temperature, and plant and animal life.

The four general topographic areas in Suwannee County are scattered large flood plains, flats, ridges, and depressions in the northern part of the county; seasonally wet flats throughout the county, except the southern and southwestern parts; long, narrow flood plains along the southern, eastern, and western boundaries; and low, rolling ridges along the southern and southwestern borders.

The soils in the depressions are covered by water for long periods. The soils on the flats have a water table near the surface during periods of moderate or heavy rainfall. The soils on the flood plains are periodically submerged for brief periods when major drainageways are flooded. The soils on the low, rolling ridges generally do not have a water table near the surface, are extremely dry only during extended periods of low rainfall, and are more susceptible to erosion than the soils in the other topographic areas.

Elevations range from more than 165 feet above sea level near Palestine Lake to less than 45 feet near the junction of the Santa Fe River and Olustee Creek. Internal soil drainage is generally not related to elevation. Even in the low, rolling areas, higher elevation does not necessarily mean better drainage.

Microrelief plays an important part in soil formation. Small rises within depressions, small rises on flats, and low areas on the rolling ridges commonly support vegetation that differs from that in the surrounding areas. Also, the depth to the seasonal high water table differs.

## Time

Most of the factors that influence soil formation require a long time to change the makeup of the soils. Some geologic components are more resistant to breakdown and change than others. In Suwannee County, the dominant geologic material is sand that is almost pure quartz and highly resistant to weathering. It is the dominant component in most of the soils.

Relatively little geologic time has elapsed since the material in which the soils in Suwannee County formed emerged from the sea and was laid down. The loamy and clayey horizons formed in place through the process of clay translocation, were deposited by rivers and streams, or were deposited in beds and layers by the sea.

## Process of Horizon Differentiation

Soil-forming processes result in a succession of layers, or horizons, in the soil. Variations in the kinds of geologic material, in the soil-forming factors, and in the length of time that the soil-forming processes are active result in the formation of different soils with different properties. Soil formation is an ongoing process, and changes can occur in short or long periods of geologic time, depending on the soilforming processes.

The processes involved in the formation of soils and the development of horizons are deposition and translocation of organic matter; translocation of iron and aluminum; deposition of silts and clays; leaching of calcium carbonates, other bases, and silts; reduction and transfer of iron and aluminum; and accumulation of organic matter on the surface.

The deposition and translocation of organic matter in a soil profile can result in the formation of a spodic horizon. This process is dominantly caused by water. Rainfall leaches organic material that has been deposited on the surface into the profile. Iron and aluminum are also leached into the profile. They adhere to sand grains, generally in a fluctuating zone of the water table. These materials coat individual sand grains. As development continues, individually coated sand grains begin to adhere to each other. The result is the formation of increasingly hard bodies. As development further continues, the movement of water is restricted, reducing permeability rates within the spodic horizon. In Suwannee County, organic matter generally is the dominant translocated material, resulting in a black or dark brown color in most spodic horizons. Over time, changes in the water table can result in the formation of spodic horizons at varying depths.

The translocation and deposition of silts and clays are caused by water. Rainfall moving through the soil translocates the soil particles downward. The material is deposited, forming an argillic horizon. Sand grains become coated and bridged. As the argillic horizon continues to form, permeability eventually becomes so restricted that water can be perched above the horizon.

The leaching of carbonates, bases, and silts has occurred in nearly all of the soils in the county. These materials are moved downward through the soils and
then out of the profile by rainfall and water movement in the soils. As a result, most of the soils in the county, except for the soils along the major drainageways, are naturally acid.

Gleying, or the chemical reduction of iron, has occurred in most of the soils that have a loamy or clayey subsoil. In the Albany, Blanton, Padlock, Bonneau, and similar soils, gleying occurs in the upper or lower part of the subsoil. The parts of a soil profile that are saturated for long periods are commonly gleyed dull gray, yellow, or white or with mottles of varying colors. Many of the better drained soils that are not mottled have brighter colors in shades of yellow to red, indicating oxidized iron. Examples are Alaga, Alpin, and Troup soils. These soils are seldom saturated for extended periods.

An accumulation of organic material in or above the mineral surface layer occurs in all of the soils in Suwannee County. The content of organic matter and thickness of the surface layer depend on drainage and vegetation. In droughty soils that have sparse vegetation, the content of organic matter generally is low because of rapid oxidation of the limited organic deposition. The surface layer of these soils is thin and light colored. In the wetter soils that support more vegetation, the organic matter is less oxidized and the amount that is available is increased. As a result, the surface layer is thicker and darker. In very wet soils where water stands above the surface for long periods, oxidation is greatly restricted. As a result, organic matter accumulates above and in the mineral surface layer, forming a very thick, dark mineral surface layer or an organic surface layer (muck). Plowing can mix the dark surface layer with an underlying horizon, resulting in a thicker dark surface layer in some soils.

Iron or phosphatic concretions or nodules form on a limited basis in Suwannee County. They are in a few soils and generally are moderately deep in the profile. Iron concretions or ironstone can result from the accumulation of translocated iron that adheres to form soft to hard, generally gravel-sized fragments. Phosphatic concretions may be the intermediate result of the weathering of soft, limestonephosphatic bedrock from which most of the carbonates have already been leached. These dominantly gravel-sized concretions are soft to firm.

## Geology

By Frank R. Rupert, Florida Geological Survey
Geology, the study of the planet Earth, and soil science share many common roots. Researchers in each field commonly address similar questions. Soil scientists are primarily concerned with the uppermost portion of the sediment column. In this portion, erosion, transportation by natural agents, and reworking by organic processes have turned rock into the soil mantle in which we grow our food and upon which we build our homes. Geologists typically delve as deep into the Earth's crust as possible and consider all the complex components of Earth systems in describing the physical structure of our planet. Each field benefits from the work of the other. Geologists use soil maps as valuable aids to field mapping, environmental studies, geomorphologic investigations, paleoenvironmental interpretations, wetlands research, and other efforts. Soil scientists similarly benefit from geologic studies of local topography, geomorphology, hydrogeology, and parent rock type for classification, mapping, and research.

The following overview of the geology of Suwannee County 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, describing the economically valuable mineral commodities.

## Geomorphology

Suwannee County encompasses portions of two broad geomorphic zones. The western two-thirds of the country lies within the Gulf Coastal Lowlands geomorphic zone (White, 1970). This zone is characterized as a low, flat, frequently swampy, westward-sloping plain that extends from east-central Suwannee County to the Gulf of Mexico. Land surface elevation generally ranges between about 35 and 100 feet above mean sea level (m.s.l.). Most of the lowlands area is ancient marine-terrace terrain. Plio-Pleistocene seas alternately flooded and retreated from this region, depositing a step-like series of marine terraces that generally parallel the modern coastline. Healy (1975) recognizes three marine-terrace elevation zones in Suwannee County. The Wicomico Terrace ( 70 to 100 feet above m.s.l.) corresponds to the Gulf Coastal Lowlands zone. The older Sunderland/Okeefenokee Terrace ( 100 to 170 feet above m.s.l.) and the Coharie Terrace ( 170 to 215 feet above m.s.l.) cover the remainder of the county. Imposed on these terrace surfaces in the western part of the county are relict marine features, such as bars, dunes, and beach ridge systems. Such relict features, composed principally of quartz sand, may be observed far inland from the modern coastline.

The slope of the land surface in the Gulf Coastal Lowlands zone ranges between 1 and 4 feet per mile southwestward. The highly karstic Oligocene and Eocene carbonates underlying this area are masked by a blanket of undifferentiated sand. Solution sinkholes are common features throughout this region. Scott (in preparation) includes the local portion of the Gulf Coastal Lowlands in his Branford Karst Plain zone of the Ocala Karst District.

The Gulf Coastal Lowlands extend eastward across the county to approximately the elevation line at 100 feet above m.s.l. At this elevation the Cody Scarp, which is a relict marine escarpment, forms a topographic break between the Gulf Coastal Lowlands to the west and the Northern Highlands in the eastern third of the county (fig. 10). The Cody Scarp is a former shoreline associated with the Wicomico sea level highstand of the Pleistocene Epoch. Erosion and dissolution of the underlying carbonate rocks have modified the escarpment into a series of coalesced sand hills snaking northwest-southeast along the irregular edge of the Northern Highlands zone.

The Northern Highlands (White, 1970) are a series of uplands comprising the northern and eastern edges of the county. These uplands extend from the Cody Scarp, at an elevation of about 100 to 125 feet above m.s.l., northward into Suwannee County and eastward into Columbia County. Miocene and Pliocene siliciclastic sediments, resting on carbonate bedrock, form the core of the uplands. The highlands have been modified largely by stream-dissection and land surface lowering due to dissolution of the underlying bedrock. Scott (in preparation) has applied the name Alachua-Lake City Karst Hills to this local portion of the Northern Highlands. Land surface elevations are mostly less than 150 feet above m.s.I.. The maximum elevation attained is about 200 feet above m.s.l. on a hilltop about 1 mile north of McAlpin in the southeastern part of the county.

The Suwannee River is the largest river in Suwannee County. It forms the northern and western boundaries of the county. It flows southwestward from Georgia to the Gulf of Mexico in a dissolutional valley carved in the underlying Oligocene and Eocene carbonates. The topographic lowlands immediately adjacent to the river, generally characterized by thin Pleistocene-Holocene sands and clayey sands lying on limestone, comprise the Suwannee River Valley Lowlands. The elevation of the river valley floor ranges from about 100 feet above m.s.l. in the northeastern part of the county to about 35 feet above m.s.l. at the southern tip of the county. For most of its course, the valley is less than 1 mile wide.


Figure 10.-Geomorphology of Suwannee County and location of cross sections.

The Santa Fe River arises in swampy hammocks to the east in Bradford County and flows westward in a narrow, incised valley that is generally 35 feet above m.s.I. or less. The river forms Suwannee County's southern boundary with Gilchrist County. The Santa Fe River flows in a channel cut in Eocene carbonates, which commonly crop out along the lower portion of the river. Pleistocene and Holocene siliciclastics form a sediment veneer over the carbonates in the riverbed and along the banks.

The Ichetucknee River comprises the southeastern-most boundary of Suwannee County. The stream arises in a series of freshwater springs within Ichetucknee Springs State Park and flows about 5 miles southwestward to a confluence with the Santa Fe River. The Ichetucknee River is a clear, pristine stream flowing in a sandbottom channel carved in the underlying Eocene carbonate bedrock. A narrow rivervalley lowlands zone, about $1 / 2$ mile wide, borders the stream along its upper reaches. The valley coalesces with the wider lowlands of the Santa Fe River near the confluence of the two rivers.


Figure 11.-Vertical cross section of geologic materials from north to south through Suwannee County.


Vertical exaggeration is approximately 300 times true scale.

Figure 12.-Vertical cross section of geologic materials from west to east through Suwannee County.

## Stratigraphy

The oldest rock commonly penetrated by water wells in Suwannee County is marine limestone of the Middle Eocene Avon Park Formation. Undifferentiated Pleistocene and Holocene surficial sands, clayey sands, and alluvium are the youngest sediments present. Figures 11 and 12 illustrate the shallow stratigraphy of the county. The Avon Park Formation and the younger overlying carbonates are important freshwater aquifers, and the following discussion is confined to these Eocene and younger sediments.

## Eocene Series

Avon Park Formation.-The Avon Park Formation (Applin and Applin, 1944; Miller, 1986) is a lithologically variable Middle Eocene (about 47 to 43.5 million years ago) carbonate unit underlying all of Suwannee County. It is typically a yellowish-gray
to grayish-orange to dark yellowish brown dolostone interbedded with grayish-white to yellowish-gray limestones and dolomitic limestones. Florida Geological Survey inhouse well logs indicate that the unit commonly contains varying amounts of peat, lignite, and plant remains. Mollusks, echinoids, and foraminifera, where preserved, are the principal fossils present. The top of the Avon Park Formation varies in depth from approximately 300 feet below land surface in the northwestern part of the county to about 100 feet below land surface in the southernmost part of the county. The logs also include data from deep oil test wells indicating that the thickness of the Avon Park Formation under the county ranges from approximately 650 to 800 feet.

Ocala Limestone.-Marine limestones of the Upper Eocene ( 39.5 to 38 million years ago) Ocala Limestone (Puri, 1957; Scott, Lloyd, and Maddox, 1991) unconformably overlie the Avon Park Formation under all of Suwannee County. The Ocala Limestone is divided into upper and lower units based on lithology. Florida Geological Survey in-house well files indicate that the lithology of the Ocala Limestone grades upward from alternating hard and soft, white to tan to gray, fossiliferous limestone and dolomitic limestone into white to very light gray to light yellowish-orange, abundantly fossiliferous, chalky limestones. Foraminifera, mollusks, bryozoans, and echinoids are the most abundant fossils in this unit.

The thickness of the Ocala Limestone under Suwannee County ranges from about 80 to 220 feet. It generally thins against the structurally high Avon Park Formation toward the crest of the Ocala Platform in the western part of the county. The Ocala Platform is a structurally positive feature centered under the Big Bend area of the western peninsula. This feature brings Eocene carbonates close to the surface over its crest, and younger units lap onto the flanks of the feature. Suwannee County lies just east of the axis of the platform. Depth to the irregular and highly-karstic top of the Ocala Limestone ranges from exposure at land surface in the eastern and southern parts of the county to about 270 feet below land surface in the eastern part of the county. The Ocala Limestone commonly crops out along the banks of the major rivers bordering the central and southern parts of the county.

The highly permeable and cavernous nature of the Ocala Limestone makes it an important freshwater bearing unit in the Floridan aquifer system. Many drinking water wells in Suwannee County withdraw water from this limestone.

## Oligocene Series

Suwannee Limestone.-The Suwannee Limestone (Cooke and Mansfield, 1936) is an Oligocene ( 37.5 to 28 million years ago) marine limestone and dolostone underlying the northern half of Suwannee County. It pinches out against the underlying Ocala Limestone just north of a line running approximately west-east and connecting the towns of Dowling Park and Wellborn. It is typically a white to yellowishgray to grayish-brown, skeletal to micritic, fossiliferous limestone. It is altered in some areas to variably recrystallized dolostone. Mollusks, foraminifera, echinoids, bryozoans, and ostacods, in various degrees of preservation, comprise the dominant fossil assemblage in the unit. The Suwannee Limestone forms the near-surface carbonate bedrock in the northern part of the county. The top of the limestone typically ranges from 150 feet below land surface to surface exposures in sinks and streambeds and along the Suwannee River north of Dowling Park. Although variable, the thickness of the limestone ranges from about 45 to 180 feet.

The Suwannee Limestone locally comprises the uppermost unit of the Floridan aquifer system. Some shallow, rural, domestic and agricultural wells draw water from this unit.

## Oligocene to Pliocene Series

Hawthorn Group Undifferentiated.-Sediments of the Hawthorn Group (Scott, 1985 and 1988) unconformably overlie the Ocala and Suwannee Limestones in the north-central and eastern parts of Suwannee County. Statewide, the age of Hawthorn

Group sediments ranges from about 25.5 to 4.8 million years ago. The Hawthorn Group is a heterogeneous mixture of siliciclastic and carbonate sediments. Tan, brown, gray, and white, sandy, phosphatic dolostone commonly occurs in the lower part of the Hawthorn Group in Suwannee County. The upper portion is typically comprised of olive-green, blue, and/or brown, phosphatic clay, quartz sand, and dolosilt with carbonate interbeds. Fossils include mollusks and foraminifera. The predominant unifying characteristic of both the upper and lower portions of the Hawthorn Group is the presence of black, brown, or amber phosphate grains that range in size from very fine sand to pebbles. The content of phosphate ranges from trace amounts to more than 20 percent.

The depth to the Hawthorn Group in Suwannee County ranges from surface exposure to about 75 feet below land surface. The maximum thickness of the Hawthorn Group is about 70 feet in the northeastern part of the county.

## Pliocene, Pleistocene, and Holocene Series

Undifferentiated Pliocene-Holocene, marine and alluvial, fine to coarse quartz sands and clayey sands form a thin veneer over most of Suwannee County. They are generally less than 50 feet thick county-wide, but some buried sinkholes may contain up to 270 feet of undifferentiated sediments. They directly overlie the karstic limestones of the Suwannee and Ocala Limestones. Many of the larger and higher sand bodies west of the Cody Scarp in the southern part of the county are relict dunes, bars, and barrier islands associated with various Pleistocene sea-level high stands.

## Ground Water

Ground water is water that fills the pore spaces in subsurface rocks and sediments. In Suwannee County, this water is derived principally from precipitation within the county and adjoining counties. The bulk of the potable water in Suwannee County is withdrawn from ground water aquifers. The three aquifer systems under the county are the surficial aquifer system, the intermediate aquifer system and confining unit, and the Floridan aquifer system.

## Surficial Aquifer System

The surficial aquifer system is the uppermost freshwater aquifer in Suwannee County. This non-artesian aquifer is present only within the thicker portions of the Pliocene-Holocene undifferentiated sands and clays. It is thin or absent in much of the county but may occur sporadically in the northeastern part of the county, east of Live Oak, and in the central part of the county (Barineau and others, in preparation). The surficial aquifer system, where present, is unconfined and its upper surface is the water table. In general, the water table fluctuates with precipitation and conforms to the topography of the land surface. Recharge to the surficial aquifer system is largely through rainfall percolating downward through the unconsolidated surficial sediments and to a lesser extent by upward seepage from the underlying Floridan aquifer system. Water naturally discharges from the aquifer by evaporation, evapotranspiration, spring seeps, and downward seepage into the Floridan aquifer system. The surficial aquifer system is not used as a source of consumptive water in Suwannee County.

## Intermediate Aquifer System and Confining Unit

A discontinuous intermediate aquifer system and confining unit is present within the Hawthorn Group sediments in Suwannee County. Clay and clayey sand beds in the Hawthorn Group, perforated by sinks, provide a region of semiconfinement to the underlying Floridan aquifer system in the eastern and northeastern parts of the
county (Scott, Lloyd, and Maddox, 1991). Laterally discontinuous carbonate beds in the Hawthorn Group may also function as an intermediate aquifer system. Wells in the vicinity of Wellborn, in the northeastern part of the county, penetrate this aquifer system. The intermediate aquifer system is not used extensively as a source of water within the county.

## Floridan Aquifer System

In Suwannee County, the Floridan aquifer system is comprised of hundreds of feet of Eocene and Oligocene marine limestones, including the Avon Park Formation, Ocala Limestone, and Suwannee Limestone. It is the principle source of drinking water in the county. The Floridan aquifer system exists as an unconfined, nonartesian aquifer in the Gulf Coastal Lowlands adjacent to the Suwannee, Santa Fe, and Ichetucknee Rivers, where porous quartz sand directly overlies the limestone. In much of the rest of Suwannee County, the Floridan aquifer system is semiconfined by clayey beds in the overlying Hawthorn Group. It is confined in the highlands near the town of Wellborn. Depth to the top of the Floridan aquifer system generally corresponds to the depth of limestone. It varies from surface exposure in the lowlands of the Suwannee, Santa Fe , and Ichetucknee River valleys and the karst plain areas of western Suwannee County to nearly 50 feet under the higher hills in the eastern part of the county.

Recharge to the Floridan aquifer system in Suwannee County is obtained from lateral inflow from the north and, to a lesser extent, from local rainfall percolating downward through the permeable surficial sands. The highest recharge by percolation occurs in the highly karstic limestone plain in the western part of the county (Stewart, 1980).

Water leaves the Floridan aquifer system through wells and through natural movement down-gradient and the subsequent discharge through numerous springs and seeps. Numerous springs occur in and along the major streams bordering the county.

## Mineral Resources

Suwannee County contains deposits of several economically viable mineral commodities. The most important of these is limestone. Other commodities of lesser potential include sand, clay, phosphate, and peat. Information for this section is compiled from Hoenstine, Spencer, and Lane (1993) and from recent mining data in the Florida Geological Survey Mine Database. Mine status may change frequently.

## Limestone

Two commercial-grade carbonate rock units are in Suwannee County. The Suwannee Limestone is near the surface under the northern half of the county. The higher-purity Ocala Limestone, which is a shallow unit, is in the southern half of the county. The economic grade varies considerably from one area to another. Several inactive mines are located in the county. These include Live Oak, five mines at locations both east and south of Dowling Park, three west of Pine Mount, two north and two east of Branford, and one old mine off County Road 247 near the SuwanneeColumbia County line.

High purity, road-base quality rock is currently mined in the Branford area in the southern part of Suwannee County. The rock is too soft and friable for aggregate use. Mining in the Branford area occurs to depths of 40 feet below water surface, and the total thickness that can be mined approaches 60 feet. Extraction is by dragline, and explosives may be used to fracture the rock. The rock is typically dried and crushed before shipment to market by truck.

Aggregate and secondary, road-base grade limestones are in much of the rest of
the county. Large pits near Live Oak were worked until 1975. The material was utilized as fine and coarse aggregate as well as road base. The area near Live Oak still contains economic reserves. The thickness of the overburden, however, may reach 50 feet, and the rock is commonly soft with numerous clay seams.

The primary uses for limestone from the county are road base, agricultural soil conditioners, and asphalt screenings. The county has sufficient reserves of limestone to last many years, and the economics of future extraction will depend largely on market demand.

## Sand

Impure quartz sand, commonly containing varying amounts of clay, heavy minerals, and organics, is a principal component of surficial and shallow sediments throughout Suwannee County. Due to the impurities, the sand has limited industrial potential. A number of shallow private pits in the county are worked for local fill sand. The potential for commercial mining is low at this time.

## Clay

Clay is sporadically a component in the undifferentiated surficial sediments covering Suwannee County, in alluvial deposits in the major stream valleys, and in Hawthorn Group sediments. Clay deposits in the county are typically stratified with quartz sands and clayey sands. Due to the impure nature of the clay, it is not an economic commodity. Several local pits provide road and fill material, but there is currently little potential for commercial use.

## Phosphate

Suwannee Country lies at the northern extent of Florida's hard-rock phosphate deposits. These deposits are typically formed at the top of the Ocala Limestone in isolated pockets and are generally less than 5 feet thick. This commodity was mined in the southeastern part of the county until 1966. The extensive pebble-phosphate deposits in south-central Florida are more economical to mine, and their availability aided in the demise of the hard-rock industry statewide. Due to the limited thickness and discontinuous nature of the hard-rock phosphate deposits, economic mining operations are unlikely to resume in Suwannee County.

## Peat

Peat forms in a wet, reducing environment when accumulation of organic materials exceeds the decomposition rate of the material. The U.S. Department of Agriculture, Soil Conservation Service, mapped about 90 acres of commercial grade peat in three isolated areas in the northeastern part of Suwannee County (USDA-SCS, 1965). The peat varies in thickness from 30 to 60 inches and rests on sand. It is comprised largely of the remains of sweetbay, ash, cypress, pine, and other water-tolerant plants. The lack of a local market keeps the potential for development of these resources low.

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## Glossary

ABC soil. A soil having an $A, a B$, and a $C$ horizon.
Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.
Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.
Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.
Alpha,alpha-dipyridyl. A dye that when dissolved in 1 N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.
Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.
Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.
Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.
Aspect. The direction in which a slope faces.
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 | than 12 |

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of $\mathrm{Ca}, \mathrm{Mg}, \mathrm{Na}$, and K ), expressed as a percentage of the total cation-exchange capacity.
Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.
Bottom land. The normal flood plain of a stream, subject to flooding.
Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.
Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality ( pH 7.0 ) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.
Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
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.
Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.
Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.
Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soilimproving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soilimproving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.
Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."
Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.
Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
Cropping system. Growing crops according to a planned system of rotation and management practices.
Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.
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.
Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."
Drainage, surface. Runoff, or surface flow of water, from an area.
Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.
Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.
Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.
Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.
Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.
Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.
Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.
Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called normal field capacity, normal moisture capacity, or capillary capacity.
Fine textured soil. Sandy clay, silty clay, or clay.
Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.
Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.
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.
Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.
Gravel. Rounded or angular fragments of rock as much as 3 inches ( 2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.
Ground water. Water filling all the unblocked pores of the material below the water table.
Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.
Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.
Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.
High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.
Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.
Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or
lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:
O horizon.-An organic layer of fresh and decaying plant residue.
A horizon.-The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.
E horizon.-The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.
$B$ horizon.-The mineral horizon below an $A$ horizon. The $B$ horizon is in part a layer of transition from the overlying $A$ to the underlying $C$ horizon. The $B$ horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.
C horizon.-The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2 , precedes the letter C.
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.
Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.
Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.
Infiltration 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 |

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.
Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.
Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:
Drip (or trickle).-Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.
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.
Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.
Knoll. A small, low, rounded hill rising above adjacent landforms.
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 clay increase between the lamellae and eluvial horizons is sufficiently large.
Leaching. The removal of soluble material from soil or other material by percolating water.
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.
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. An area that has little or no natural soil and supports little or no vegetation.
Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.
Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.
Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.
Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.
Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance-few, common, and many; sizefine, 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 $10 \mathrm{YR} 6 / 4$ is a color with hue of 10YR, value of 6 , and chroma of 4 .
Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)
Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.
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 |  |
| :---: | :---: |
|  |  |
| 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 inche |

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.
pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)
Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.
Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.
Plastic limit. The moisture content at which a soil changes from semisolid to plastic.
Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.
Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.
Potential native plant community. See Climax plant community.
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 in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

| Ultra acid | less than 3.5 |
| :---: | :---: |
| Extremely acid | 3.5 to 4.4 |
| Very strongly acid | .. 4.5 to 5.0 |
| Strongly acid | .... 5.1 to 5.5 |
| Moderately acid | .... 5.6 to 6.0 |
| Slightly acid | .. 6.1 to 6.5 |
| Neutral. | ... 6.6 to 7.3 |
| Slightly alkaline | .... 7.4 to 7.8 |
| Moderately alkaline | .... 7.9 to 8.4 |
| Strongly alkaline | ...... 8.5 to 9.0 |
| Very strongly alkalin | 9.1 and higher |

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.
Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.
Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized ( Fe III). A type of redoximorphic feature.
Relief. The elevations or inequalities of a land surface, considered collectively.
Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.
Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.
Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
Root zone. The part of the soil that can be penetrated by plant roots.
Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.
Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.
Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
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.
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 depression in the landscape where limestone has been dissolved.
Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75 .
Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus,
a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

| Level ..... | 0 to 1 percent |
| :---: | :---: |
| Nearly level | 0 to 2 percent |
| Gently sloping | 2 to 5 percent |
| Strongly sloping | 5 to 15 percent |
| Moderately steep | 5 to 30 percent |
|  |  |

Classes for complex slopes are as follows:

| Nearly level .................................... 0 to 2 percent |  |
| :---: | :---: |
| Undulating ....................................... 2 to 5 percent |  |
| Rolling | 5 to 15 percent |
| Hilly | 15 to 30 percent |
|  | rcent and hi |

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.
Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.
Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium ( 15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.
Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.
Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.
Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

| Very coarse sand | 2.0 to 1.0 |
| :---: | :---: |
| Coarse sand | ..... 1.0 to 0.5 |
| Medium sand | ... 0.5 to 0.25 |
| Fine sand | .... 0.25 to 0.10 |
| Very fine sand | .. 0.10 to 0.05 |
| Silt | 0.05 to 0.002 |
| Clay | less than 0.002 |

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the $\mathrm{A}, \mathrm{E}$, 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.
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).
Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during
preparation of a seedbed for the next crop, and during the early growing period of the new crop.
Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.
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.
Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."
Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.
Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
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.
Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.
Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.
Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.
Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
Windthrow. The uprooting and tipping over of trees by the wind.

## Tables

## Soil Survey of Suwannee County, Florida

## Table 1.--Temperature and Precipitation

[Recorded in the period 1971-2000 at Live Oak, Florida]

| Month | Temperature |  |  |  |  |  | Precipitation |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average daily maximum | $\begin{array}{\|c} \text { Average } \\ \text { daily } \\ \text { minimum } \end{array}$ | Average | 2 years in 10 will have-- |  | Average number of growing degree days* | Average | 2 years in 10 will have-- |  | Average number of days with 0.10 inch or more | Average snowfall |
|  |  |  |  | Maximum temp. \| higher |than-- | Minimum temp. lower than-- |  |  | Less than-- | More than-- |  |  |
|  | ${ }^{\circ} \mathrm{F}$ | ${ }^{\circ} \mathrm{F}$ | ${ }^{\circ} \mathrm{F}$ | ${ }^{\circ} \mathrm{F}$ | ${ }^{\circ} \mathrm{F}$ | Units | In | In | In |  | In |
| January---- | 67.4 | 42.2 | 54.8 | 83 | 17 | 213 | 4.99 | 2.49 | 7.35 | 6 | 0.0 |
| February--- | 70.8 | 44.2 | 57.5 | 85 | 21 | 244 | 3.94 | 1.62 | 5.96 | 5 | 0.0 |
| March------ | 76.9 | 49.7 | 63.3 | 88 | 27 | 420 | 5.32 | 2.72 | 7.90 | 5 | 0.0 |
| April------ | 82.2 | 54.4 | 68.3 | 93 | 34 | 550 | 3.38 | 1.15 | 5.07 | 3 | 0.0 |
| May-------- | 88.4 | 62.1 | 75.3 | 98 | 45 | 783 | 3.23 | 1.43 | 4.87 | 5 | 0.0 |
| June | 92.0 | 68.6 | 80.3 | 101 | 56 | 908 | 6.06 | 3.51 | 8.17 | 8 | 0.0 |
| July- | 93.3 | 71.2 | 82.2 | 101 | 63 | 999 | 6.34 | 3.65 | 8.82 | 8 | 0.0 |
| August----- | 92.5 | 70.8 | 81.7 | 99 | 64 | 982 | 6.21 | 3.87 | 8.34 | 9 | 0.0 |
| September--- | 89.8 | 68.0 | 78.9 | 97 | 54 | 867 | 4.64 | 1.70 | 7.14 | 6 | 0.0 |
| October---- | 83.0 | 58.2 | 70.6 | 93 | 35 | 639 | 3.26 | 0.52 | 5.39 | 3 | 0.0 |
| November---- | 75.8 | 50.7 | 63.3 | 87 | 27 | 404 | 2.43 | 0.80 | 4.18 | 3 | 0.0 |
| December---- | 68.8 | 44.1 | 56.4 | 84 | 19 | 249 | 3.10 | 0.95 | 5.16 | 4 | 0.1 |
| Yearly: |  |  |  |  |  |  |  |  |  |  |  |
| Average--- | 81.7 | 57.0 | 69.4 | --- | --- | --- | --- | --- | --- | --- | --- |
| Extreme--- | 106 | 6 | --- | 102 | 15 | --- | --- | --- | --- | --- | --- |
| Total---- | - | - | - | --- | --- | 7,259 | 52.92 | 43.75 | 60.85 | 65 | 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 (50 degrees F).

| Table 2.--Freeze Dates in Spring and Fall |  |
| :---: | :---: | :---: | :---: |
| Recorded in the period $1971-2000$ at Live Oak, <br> Florida] | Temperature |

## Soil Survey of Suwannee County, Florida

Table 3.--Acreage and Proportionate Extent of the Soils

| Map symbol | Soil name | Acres | Percent |
| :---: | :---: | :---: | :---: |
| 2 | Ocilla-Albany-Blanton complex, 0 to 5 percent slopes---------------------- | 5,583 | 1.3 |
| 4 | Blanton fine sand, 5 to 8 percent slopes | 450 | 0.1 |
| 5 | Blanton-Bonneau complex, 0 to 5 percent slop | 31,778 | 7.2 |
| 7 | Bigbee-Garcon-Meggett complex, occasionally flooded | 10,733 | 2.4 |
| 10 | Blanton-Alpin complex, 0 to 5 percent slopes, occasionally flooded------\| | 11,925 | 2.7 |
| 11 | Bonneau-Blanton-Padlock complex, 0 to 5 percent slopes | 57,387 | 13.0 |
| 12 | Blanton-Chiefland-Ichetucknee complex, 5 to 8 percent slope | 419 | * |
| 13 | Blanton-Alpin-Bonneau complex, 0 to 5 percent slopes | 90,031 | 20.3 |
| 14 | Blanton-Bonneau complex, 5 to 8 percent slopes | 3,646 | 0.8 |
| 15 | Blanton-Lynchburg-Bonneau complex, 0 to 5 percent slope | 4,982 | 1.1 |
| 17 | Falmouth-Bonneau-Blanton complex, 0 to 5 percent slopes | 22,151 | 5.0 |
| 18 | Otela-Chiefland-Ichetucknee complex, 0 to 5 percent slopes--------------- | 4,961 | 1.1 |
| 19 | Chiefland fine sand, occasionally flooded- | 462 | 0.1 |
| 20 | Chiefland-Pedro Variant complex, occasionally flooded | 123 | * |
| 21 | Alaga loamy fine sand, 0 to 5 percent slopes | 1,707 | 0.4 |
| 22 | Blanton-Padlock-Alpin complex, 0 to 5 percent slopes | 4,119 | 0.9 |
| 25 | Pantego fine sandy loam- | 1,209 | 0.3 |
| 26 | Hurricane, Albany, and Chipley soils, 0 to 3 percent slopes | 6,473 | 1.5 |
| 29 | Alpin fine sand, 0 to 5 percent slopes | 77,277 | 17.4 |
| 30 | Alpin fine sand, 5 to 12 percent slope | 2,167 | 0.5 |
| 32 | Leon fine sand- | 1,078 | 0.2 |
| 34 | Falmouth-Bonneau-Blanton complex, 5 to 8 percent slope | 1,892 | 0.4 |
| 35 |  | 12,773 | 2.9 |
| 38 | Alpin fine sand, 0 to 5 percent slopes, occasionally flooded------------\| | 3,962 | 0.9 |
| 39 | Sapelo-Mascotte-Albany complex, frequently flooded | 1,750 | 0.4 |
| 41 |  | 1,241 | 0.3 |
| 43 | Blanton-Foxworth-Alpin complex, 0 to 5 percent slopes--------------------- | 27,535 | 6.2 |
| 45 | Chipley-Foxworth-Albany complex, 0 to 5 percent slopes--------------------- | 2,386 | 0.5 |
| 46 | Pamlico-Olustee-Pottsburg complex, depressional-------------------------- | 8,354 | 1.9 |
| 47 |  | 467 | 0.1 |
| 49 |  | 4,750 | 1.1 |
| 51 | Plummer fine sand- | 656 | 0.1 |
| 52 | Plummer fine sand, depressiona | 689 | 0.2 |
| 54 | Plummer muck, depressional | 167 | * |
| 59 | Troup fine sand, 0 to 5 percent slopes | 116 | * |
| 60 |  | 37 | * |
| 61 | Udorthents-Pits complex, 1 to 8 percent slopes-----------------------------1.- | 2,543 | 0.6 |
| 65 | Garcon-Eunola complex, 2 to 5 percent slopes, occasionally fl | 588 | 0.1 |
| 68 | Mascotte and Plummer soils, occasionally flooded | 479 | 0.1 |
| 69 | Osier-Bibb-Albany complex, frequently flooded------------------------------1 | 3,423 | 0.8 |
| 71 | Otela-Alpin-Chiefland complex, 0 to 5 percent slopes---------------------1 | 16,068 | 3.6 |
| 72 | Ousley-Blanton-Fluvaquents complex, 0 to 5 percent slopes, occasionally flooded | 3,179 | 0.7 |
| 73 | Boulogne-Chipley-Hurricane complex, 0 to 5 percent slopes---------------- | 1,903 | 0.4 |
| 74 | Surrency, Plummer, and Cantey soils, frequently flooded | 965 | 0.2 |
| 76 | Wampee-Blanton complex, 5 to 12 percent slopes | 443 | 0.1 |
| 77 | Wampee-Blanton complex, 12 to 35 percent slopes---------------------------1. | 327 | * |
| 79 | Blanton fine sand, 0 to 5 percent slopes | 3,068 | 0.7 |
| 80 | Bonneau fine sand, 0 to 5 percent slopes | 1,233 | 0.3 |
| 81 | Blanton-Bonneau-Ichetucknee complex, 2 to 5 percent slopes | 205 | * |
| 83 | Urban land- | 149 | * |
| 86 | Aquents, frequently flooded | 227 | * |
| 99 | Water----------------------------------------------------------------------- | 2,764 | 0.6 |
|  |  | 443,000 | 100.0 |

* Less than 0.1 percent.

Table 4.--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]

| $\begin{aligned} & \text { Map symbol } \\ & \text { and soil name } \end{aligned}$ | Land capability | Bahiagrass | Corn | Peanuts | Tobacco | \| Watermelons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AUM | Bu | Lbs | Lbs | Tons |
| 2 : |  |  |  |  |  |  |
| Ocilla- | 3w | 7.5 | 75 | 2,200 | 2,600 | --- |
| Albany- | 3 e | 6.5 | 75 | 1,700 | 2,100 | --- |
| Blanton-------- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| 4: |  |  |  |  |  |  |
| Blanton- | 4 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| 5: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Bonneau--------- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| 7 : |  |  |  |  |  |  |
| Bigbee- | 3s | 7.5 | 50 | --- | --- | -- |
| Garcon- | 2w | --- | --- | --- | -- | --- |
| Meggett-- | 6w | --- | -- | -- - | --- | -- - |
| 10: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Alpin-- | 4 s | 8 | -- | -- - | -- - | --- |
| 11: |  |  |  |  |  |  |
| Bonneau-- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Padlock---------- | 4 e | 9 | 75 | 2,900 | 2,300 | 13 |
| 12: |  |  |  |  |  |  |
| Blanton- | 4 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Chiefland- | 4 s | 9 | 50 | 2,500 | --- | 10 |
| Ichetucknee- | 6 e | 8.5 | 60 | 2,600 | 2,300 | 10 |
| 13: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Alpin-- | 4 s | 8 | --- | --- | --- | --- |
| Bonneau---------- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| 14: |  |  |  |  |  |  |
| Blanton- | 4 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Bonneau---------- | 3 s | 8 | 85 | 2,900 | 2,600 | --- |
| 15: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Lynchburg- | 2w | 10 | 115 | --- | 2,800 | --- |
| Bonneau----- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| 17: |  |  |  |  |  |  |
| Falmouth-- | 4 e | 9 | 75 | 2,900 | 2,300 | 13 |
| Bonneau-- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| Blanton----------- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| 18: |  |  |  |  |  |  |
| Otela--- | 3 s | 6.5 | 35 | 3,500 | --- | 5 |
| Chiefland---- | 3 s | 9 | 50 | 2,500 | --- | 10 |
| Ichetucknee------- | 4 e | 9 | 75 | 2,900 | 2,600 | 13 |
| $19 \text { : }$ |  |  |  |  |  |  |
| Chiefland-------- | 3 s | 8 | 65 | 2,700 | --- | 12 |

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

| Map symbol and soil name | Land capability | Bahiagrass | Corn | Peanuts | Tobacco | Watermelons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AUM | Bu | Lbs | Lbs | Tons |
| 20: |  |  |  |  |  |  |
| Chiefland- | 3 s | 8 | 65 | 2,700 | --- | 12 |
| Pedro Variant---- | 4 s | 8 | 50 | 2,700 | --- | 9 |
| 21: |  |  |  |  |  |  |
| Alaga- | 3 s | 7 | 60 | 2,000 | --- | --- |
| 22: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Padlock | 4 e | 9 | 75 | 2,900 | 2,300 | 13 |
| Alpin- | 4 s | 8 | --- | - | --- | --- |
| 25: |  |  |  |  |  |  |
| Pantego-- | 7w | --- | --- | --- | --- | --- |
| 26: |  |  |  |  |  |  |
| Hurricane- | 3w | --- | --- | --- | --- | --- |
| Albany- | 3 e | 6.5 | 75 | 1,700 | 2,100 | --- |
| Chipley- | 3 s | 7.5 | 50 | 2,200 | 2,000 | 5 |
| 29: |  |  |  |  |  |  |
| Alpin----------- | 4 s | 8 | --- | --- | --- | --- |
| 30: |  |  |  |  |  |  |
| Alpin- | $6 s$ | 8 | - | --- | --- | --- |
| 32: |  |  |  |  |  |  |
| Leon--- | 4w | 7.5 | 50 | --- | --- | --- |
| 34: |  |  |  |  |  |  |
| Falmouth- | 4 e | 9 | 75 | 2,900 | 2,300 | 13 |
| Bonneau- | 3 s | 8 | 85 | 2,900 | 2,600 | --- |
| Blanton--------- | 4 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| $35:$ |  |  |  |  |  |  |
| Mascotte | 3 w | 8 | 50 | --- | --- | 5 |
| Sapelo- | 4w | --- | --- | -- - | --- | --- |
| 38: |  |  |  |  |  |  |
| Alpin----- | 4 s | 8 | --- | --- | -- | --- |
| 39 : |  |  |  |  |  |  |
| Sapelo- | 4w | - | --- | --- | --- | --- |
| Mascotte | 3w | 8 | 50 | --- | --- | 5 |
| Albany- | 3 e | 6.5 | 75 | 1,700 | 2,100 | --- |
| 41: |  |  |  |  |  |  |
| Fluvaquents-- | 7w | --- | --- | --- | - | --- |
| Meggett- | 6w | --- | -- | --- | --- | --- |
| Bigbee----------- | 5w | 7.5 | 50 | -- - | --- | --- |
| 43: |  |  |  |  |  |  |
| Blanton- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Foxworth--------- | 3 s | 7.5 | --- | - | --- | --- |
| Alpin----------- | 4 s | 8 | --- | --- | --- | --- |
| 45: |  |  |  |  |  |  |
| Chipley-- | 3 s | 7.5 | 50 | 2,200 | 2,000 | 5 |
| Foxworth-- | 3 s | 7.5 | --- | --- | --- | --- |
| Albany---------- | 3 e | 6.5 | 75 | 1,700 | 2,100 | --- |

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued


Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

| Map symbol and soil name | Land capability | Bahiagrass | Corn | Peanuts | Tobacco | Watermelons |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AUM | $B u$ | Lbs | Lbs | Tons |
| 74: |  |  |  |  |  |  |
| Surrency- | 6w | --- | --- | --- | --- | --- |
| Plummer-- | 4w | 5 | --- | --- | --- | - |
| Cantey---------- | 6w | 5 | - | --- | --- | - |
| 76 : |  |  |  |  |  |  |
| Wampee---- | 4 s | 8.5 | 65 | --- | --- | - |
| Blanton-- | 4 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| 77: |  |  |  |  |  |  |
| Wampee- | 6 s | 8.5 | 65 | --- | --- | - |
| Blanton-- | 6 s | 5 | -- - | --- | --- | 12 |
| 79 : |  |  |  |  |  |  |
| Blanton-- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| 80 : |  |  |  |  |  |  |
| Bonneau-- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| 81: |  |  |  |  |  |  |
| Blanton---- | 3 s | 6.5 | 60 | 2,200 | 2,000 | 12 |
| Bonneau- | 2 s | 8 | 85 | 2,900 | 2,600 | --- |
| Ichetucknee----- | 4 e | 9 | 75 | 2,900 | 2,600 | 13 |
| $83 \text { : }$ |  |  |  |  |  |  |
| 86 : |  |  |  |  |  |  |
| Aquents------------ | 7w | --- | --- | --- | --- | --- |

|rable 5.--Forestland Management and Productivity
[Only the soils suitable for production of commercial trees are listed)

| Map symbol and soil name | $\begin{aligned} & \text { \|Ordi- } \\ & \mid \text { nation } \\ & \text { \| symbol } \end{aligned}$ | Management concerns |  |  |  |  | Potential productivity |  |  | Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Erosion hazard | $\left\lvert\, \begin{gathered} \text { Equip- } \\ \text { ment } \\ \text { limita- } \\ \text { tion } \end{gathered}\right.$ | Seedling mortality | Windthrow hazard | Plant competition | Common trees | Site index | Volume of wood fiber |  |
| $2:$Ocilla | 8W | Slight | \|Moderate | Moderate\| | --- | --- | \|Loblolly pine <br> \|Longleaf pine- <br> \|Slash pine- | $\begin{aligned} & 85 \\ & 77 \\ & 90 \end{aligned}$ | m3/ha | Loblolly pine, slash pine |
|  |  |  |  |  |  |  |  |  | 8 |  |
|  |  |  |  |  |  |  |  |  | 7 |  |
|  |  |  |  |  |  |  |  |  | 11 |  |
| Albany--------- | 10W | Slight | \| Moderate | Moderate\| | Slight | \| Moderate | Loblolly pine | 95 | 10 | Loblolly pine, slash pine |
|  |  |  |  |  |  |  | Longleaf pine | 80 | 7 |  |
|  |  |  |  |  |  |  | Slash pine---- | 85 | 11 |  |
| Blanton-------- | 11S | \|Slight | \| Moderate | Moderate | Slight | Slight | Bluejack oak | --- | --- | Slash pine, longleaf pine |
|  |  |  |  |  |  |  | Live oak---- | -- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine--- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine-- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak- | --- | --- |  |
|  |  |  |  |  |  |  | Turkey oak----- | -- | --- |  |
| 4 : Blanton | 11s | Slight | \| Moderate | Moderate | Slight | Slight |  |  |  |  |
|  |  |  |  |  |  |  | Bluejack oak | --- | --- | Slash pine, longleaf pine |
|  |  |  |  |  |  |  | Live oak | --- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine-- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine-- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine----- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak- | --- | --- |  |
|  |  |  |  |  |  |  | Turkey oak----- | -- | --- |  |
| 5 : <br> Blanton | 11S | Slight | Moderate | Moderate | Slight | Slight |  |  |  | Slash pine, longleaf pine |
|  |  |  |  |  |  |  | Bluejack oak--- | --- | --- |  |
|  |  |  |  |  |  |  | Live oak---- | -- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine-- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak- | - | -- |  |
|  |  |  |  |  |  |  | Turkey oak----- | --- | -- |  |
| Bonneau-------- | 10S | Slight | Moderate | Moderate | Slight | Slight | Hickory | --- | --- | Loblolly pine, longleaf pine |
|  |  |  |  |  |  |  | Loblolly pine- | 95 | 10 |  |
|  |  |  |  |  |  |  | Longleaf pine | 75 | 6 |  |
|  |  |  |  |  |  |  | White oak------- | --- | --- |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 5.--Forestland Management and Productivity--Continued

| Map symbol and soil name | Ordination symbol | Management concerns |  |  |  |  | Potential productivity |  |  | Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{array}{\|l} \text { Erosion } \\ \text { hazard } \end{array}$ | $\|$Equip- <br> ment <br> limita- <br> tion | Seedling mortality | Wind- <br> throw <br> hazard | $\left\lvert\, \begin{gathered} \text { Plant } \\ \text { competi- } \\ \text { tion } \end{gathered}\right.$ | Common trees | Site <br> index | Volume of wood fiber |  |
| 7: | 9 S | Slight | Slight | \| Moderate | Slight | Slight | Loblolly pine------\| | 88 | m3/ha |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Bigbee--------- |  |  |  |  |  |  |  |  | 9 | Loblolly pine |
| Garcon--------- | 10W | Slight | Slight | \| Moderate | Slight | Moderate | Longleaf pine- | 70 | 6 | Slash Pine |
|  |  |  |  |  |  |  | Slash pine---- | 80 | 10 |  |
| Meggett--------- | 13W | Slight | Severe | Severe | Slight | \| Severe | Loblolly pine | 100 | 11 | \|Slash pine, loblolly pine |
|  |  |  |  |  |  |  | Pond pine--- | 75 | 4 |  |
|  |  |  |  |  |  |  | Slash pine----- |  |  |  |
| 10: | 11s | Slight | \| Moderate | Moderate | Slight | Slight |  |  |  | Slash pine, longleaf pine |
| Blanton-------- |  |  |  |  |  |  | Bluejack oak--- |  |  |  |
|  |  |  |  |  |  |  | Live oak | --- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine-- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine----- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak- | --- | --- |  |
|  |  |  |  |  |  |  | Turkey oak | -- | --- |  |
| Alpin---------- | 8S | Slight | \|Moderate | Moderate | Slight | Slight | Blackjack oak | - | - | Slash pine, loblolly pine |
|  |  |  |  |  |  |  | Bluejack oak- | --- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine- | 85 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine- | 70 | 6 |  |
|  |  |  |  |  |  |  |  | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine- | 90 | 11 |  |
|  |  |  |  |  |  |  | Turkey oak----- | --- | -- |  |
| 11: | 10S |  | \| Moderate | Moderate | Slight | \|Slight |  |  |  |  |
| Bonneau-------- |  | Slight |  |  |  |  | Hickory- | --- | --- | Loblolly pine, longleaf pine |
|  |  |  |  |  |  |  | Loblolly pine- | 95 | 10 |  |
|  |  |  |  |  |  |  | Longleaf pine-- | 75 | 6 |  |
|  |  |  |  |  |  |  | White oak------ | --- | --- |  |
| Blanton-------- | 11S | \|Slight | \| Moderate | Moderate | Slight | \|Slight | Bluejack oak | --- | --- |  |
|  |  |  |  |  |  |  | Live oak---- | --- | --- | longleaf pine |
|  |  |  |  |  |  |  | Loblolly pine- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine---- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak | --- | 11 |  |
|  |  |  |  |  |  |  | Turkey oak------ | --- | --- |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued

| Map symbol and soil name | Ordi- <br> nation <br> symbol | Management concerns |  |  |  |  | Potential productivity |  |  | Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{array}{\|l} \mid \text { Erosion } \\ \mid \text { hazard } \end{array}$ | $\left\lvert\, \begin{gathered} \text { Equip- } \\ \text { ment } \\ \text { limita- } \\ \text { tion } \end{gathered}\right.$ | $\begin{aligned} & \mid \text { Seedling } \\ & \mid \text { mortal- } \\ & \text { ity } \end{aligned}$ | Wind- <br> throw <br> hazard | $\left\lvert\, \begin{gathered} \text { Plant } \\ \text { competi- } \\ \text { tion } \end{gathered}\right.$ | Common trees | Site <br> index | Volume of wood fiber |  |
|  | 10S | Slight | \|Moderate | Moderate | Slight | Slight | \|Hickory---------- <br> \| Loblolly pine---- <br> Longleaf pine---- <br> White oak | m3/ha |  | Loblolly pine, longleaf pine |
|  |  |  |  |  |  |  |  | --- |  |  |
|  |  |  |  |  |  |  |  | --- | -- |  |
|  |  |  |  |  |  |  |  | 75 | 6 |  |
|  |  |  |  |  |  |  |  | --- | --- |  |
| $17:$ <br> Falmouth | 11C | \|Moderate| | Moderate | Slight | Slight | \| Moderate | \| Laurel oak----- ${ }^{\text {Loblolly pine-- }}$ \| Longleaf pine-- |  |  | Slash pine, loblolly pine, longleaf pine |
|  |  |  |  |  |  |  |  | --- | --- |  |
|  |  |  |  |  |  |  |  | 87 | 9 |  |
|  |  |  |  |  |  |  |  | 70 | 6 |  |
|  |  |  |  |  |  |  |  | --- | --- |  |
|  |  |  |  |  |  |  |  | 90 | 11 |  |
|  |  |  |  |  |  |  |  | --- | - |  |
|  |  |  |  |  |  |  |  | --- | -- - |  |
| Bonneau-------- | 10S | Slight | Moderate | \| Moderate | Slight | Slight | Hickory----- | --- |  | Loblolly pine, longleaf pine |
|  |  |  |  |  |  |  | Loblolly pine-- | 95 75 | 10 |  |
|  |  |  |  |  |  |  | White oak------- | --- | --- |  |
| Blanton-------- | 11S | Slight | Moderate | Moderate | Slight | Slight | Bluejack oak- | -- | --- | \|Slash pine, longleaf pine |
|  |  |  |  |  |  |  | Live oak--- | --- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine-- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine--- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine---- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak | -- | - |  |
|  |  |  |  |  |  |  | Turkey oak------ | --- | --- |  |
| ```18: Otela``` | 10s | Slight | \| Moderate | Severe | Slight | \| Moderate |  |  |  | ```Slash pine, longleaf pine, loblolly pine``` |
|  |  |  |  |  |  |  | Black cherry | - | --- |  |
|  |  |  |  |  |  |  | Live oak---- | - | --- |  |
|  |  |  |  |  |  |  | Loblolly pine- | 70 | 6 |  |
|  |  |  |  |  |  |  | Longleaf pine | 80 | 7 |  |
|  |  |  |  |  |  |  | Slash pine----- | 80 | 10 |  |
|  |  |  |  |  |  |  | Southern redcedar | --- | --- |  |
|  |  |  |  |  |  |  | Turkey oak------ | --- | -- |  |
| Chiefland------- | 11S | \|Slight | \| Moderate | Moderate | Slight | \| Moderate | Hickory- | - | - | \|Slash pine, loblolly pine, longleaf pine |
|  |  |  |  |  |  |  | Live oak-- | --- | --- |  |
|  |  |  |  |  |  |  | Longleaf pine | 65 | 5 |  |
|  |  |  |  |  |  |  | Post oak--- | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine | 85 | 11 |  |
|  |  |  |  |  |  |  | Sweetgum-------- | --- | --- |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued

| Map symbol and soil name | Ordi- <br> nation <br> symbol | Management concerns |  |  |  |  | Potential productivity |  |  | Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Erosion hazard | $\left\lvert\, \begin{gathered} \text { Equip- } \\ \text { ment } \\ \mid \text { limita- } \\ \text { tion } \end{gathered}\right.$ | $\left\lvert\, \begin{array}{\|c\|} \text { Seedling } \\ \text { mortal- } \\ \text { ity } \end{array}\right.$ | Windthrow hazard | Plant competition | Common trees | Site <br> index | Volume of wood fiber |  |
| 41: <br> Fluvaquents | 7W | Slight | Severe | Severe | Moderate | Severe |  | m3/ha |  | --- |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | Baldcypress | 108 | 7 |  |
|  |  |  |  |  |  |  | Blackgum-- | --- |  |  |
|  |  |  |  |  |  |  | Laurel oak----- | --- | --- |  |
|  |  |  |  |  |  |  | Pondcypress- | --- | --- |  |
|  |  |  |  |  |  |  | Red maple | --- | --- |  |
|  |  |  |  |  |  |  | Sweetbay- | --- | --- |  |
|  |  |  |  |  |  |  | Sweetgum------ | --- | --- |  |
|  |  |  |  |  |  |  | Water oak------- | --- | --- |  |
| Meggett-------- | 13W | Slight | Severe | \| Severe | Slight | Severe | Loblolly pine | 100 | 11 | $\begin{aligned} & \text { Slash pine, } \\ & \text { loblolly pine } \end{aligned}$ |
|  |  |  |  |  |  |  | Pond pine----- | 75 | 11 |  |
|  |  |  |  |  |  |  | Slash pine----- | 100 | 13 |  |
| Bigbee--------- | 9 S | Slight | Slight | Moderate | Slight | Slight | Loblolly pine------\| | 88 | 9 | Loblolly pine |
| 43: | 11s | Slight | \| Moderate | Moderate | Slight | Slight |  |  |  | Slash pine, longleaf pine |
|  |  |  |  |  |  |  | Bluejack oak- | --- | --- |  |
|  |  |  |  |  |  |  | Live oak----- | --- | - |  |
|  |  |  |  |  |  |  | Loblolly pine- | 80 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine-- | 70 | 6 |  |
|  |  |  |  |  |  |  | Slash pine----- | 90 | 11 |  |
|  |  |  |  |  |  |  | Southern red oak- | --- | --- |  |
|  |  |  |  |  |  |  | Turkey oak------ | --- | --- |  |
| Foxworth-------- | 10S | Slight | Moderate | Moderate | Slight | Moderate | Bluejack oak- | --- | --- | Slash pine |
|  |  |  |  |  |  |  | Laurel oak--- | -- - | - |  |
|  |  |  |  |  |  |  | Live oak- | --- | --- |  |
|  |  |  |  |  |  |  | Longleaf pine | 65 | 5 |  |
|  |  |  |  |  |  |  | Post oak--- | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine- | 80 | 10 |  |
|  |  |  |  |  |  |  | Turkey oak----- | -- | --- |  |
| Alpin---------- | 8S | Slight | \| Moderate | Moderate | Slight | Slight | Blackjack oak | -- | --- | Slash pine, loblolly pine |
|  |  |  |  |  |  |  | Bluejack oak-- | --- | - |  |
|  |  |  |  |  |  |  | Loblolly pine- | 85 | 8 |  |
|  |  |  |  |  |  |  | Longleaf pine | 70 | 6 |  |
|  |  |  |  |  |  |  | Post oak--- | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine- | 90 | 11 |  |
|  |  |  |  |  |  |  | Turkey oak------- | --- | --- |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 5.--Forestland Management and Productivity--Continued

| Map symbol and soil name | Ordi- <br> nation <br> symbol | Management concerns |  |  |  |  | Potential productivity |  |  | \|Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Erosion hazard | $\|$Equip- <br> ment <br> limita- <br> tion | \|Seedling mortality | Wind- <br> throw <br> hazard | Plant competition | Common trees | Site <br> index | Volume of wood fiber |  |
| 45 : <br> Chipley | 11S | Slight | \|Moderate | Slight | Slight | \| Moderate |  | m3/ha |  | Slash pine, loblolly pine |
|  |  |  |  |  |  |  | Blackjack oa |  |  |  |
|  |  |  |  |  |  |  | Loblolly pine | -- | --- |  |
|  |  |  |  |  |  |  | \|Longleaf pine | 80 | 7 |  |
|  |  |  |  |  |  |  | \| Post oak------ | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine | 90 | 11 |  |
|  |  |  |  |  |  |  | \| Turkey oak----- | --- | --- |  |
| Foxworth-------- | 10S | Slight | \|Moderate | Moderate | Slight | Moderate | \|Bluejack oak- | --- | --- | Slash pine |
|  |  |  |  |  |  |  | \|Laurel oak----- | - | --- |  |
|  |  |  |  |  |  |  | Live oak- | --- | --- |  |
|  |  |  |  |  |  |  | \| Longleaf pine | 65 | 5 |  |
|  |  |  |  |  |  |  | Post oak----- | --- | --- |  |
|  |  |  |  |  |  |  | Slash pine | 80 | 10 |  |
|  |  |  |  |  |  |  | Turkey oak----- | --- | --- |  |
| Albany--------- | 10W | Slight | Moderate | Moderate | Slight | Moderate | Loblolly pine | 95 | 10 | Loblolly pine, slash pine |
|  |  |  |  |  |  |  | Longleaf pine | 80 | 7 |  |
|  |  |  |  |  |  |  | \| Slash pine----- | 85 | 11 |  |
| 46 : | 8W | Slight | \| Severe | Severe | --- | --- |  |  |  | Sweetgum |
| Pamlico-------- |  |  |  |  |  |  | Baldcypress |  | --- |  |
|  |  |  |  |  |  |  | Pond pine-- | 55 | --- |  |
|  |  |  |  |  |  |  | \| Slash pine---- | 70 | 8 |  |
|  |  |  |  |  |  |  | \| Water tupelo--- | --- | --- |  |
| Olustee--------\| | 10W | Slight | Moderate | Moderate | Slight | Moderate | Loblolly pine- | 80 | 8 | Slash pine, loblolly pine |
|  |  |  |  |  |  |  | Longleaf pine | 70 | 6 |  |
|  |  |  |  |  |  |  | \|Slash pine----- | 80 | 10 |  |
| Pottsburg------ | 10W | Slight | Moderate | Moderate | Slight | Moderate |  | --- | --- | Slash pine, loblolly pine, longleaf pine |
|  |  |  |  |  |  |  | Loblolly pine | 70 | 6 |  |
|  |  |  |  |  |  |  | Longleaf pine | 65 | 5 |  |
|  |  |  |  |  |  |  | \|Slash pine- | 80 | 10 |  |
|  |  |  |  |  |  |  | \| Water oak------- | --- | --- |  |
| 47 : | 11W | Slight | Severe |  | Slight | Severe |  |  |  |  |
| Clara---------- |  |  |  |  |  |  | \| Blackgum- | -- | -- | Slash pine, loblolly pine |
|  |  |  |  | Severe |  |  | Cabbage palmetto | --- | --- |  |
|  |  |  |  |  |  |  | \|Laurel oak----- | --- | --- |  |
|  |  |  |  |  |  |  | Loblolly pine- | 91 | 9 |  |
|  |  |  |  |  |  |  | \|Red maple----- | -- | -- |  |
|  |  |  |  |  |  |  | \|Slash pine- | 88 | 11 |  |
|  |  |  |  |  |  |  | \|Sweetgum- | --- | --- |  |
|  |  |  |  |  |  |  | \| Water oak------ | --- | --- |  |

Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued

| Map symbol and soil name | Ordi- <br> nation <br> symbol | Management concerns |  |  |  |  | Potential productivity |  |  | Suggested trees to plant |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Erosion hazard | $\|$Equip- <br> ment <br> limita- <br> tion | \|Seedling |mortality | Windthrow hazard | $\left\lvert\, \begin{gathered} \text { Plant } \\ \text { competi- } \\ \text { tion } \end{gathered}\right.$ | Common trees | Site index | Volume of wood fiber |  |
|  | --- | --- | --- | --- | --- | --- |  |  | m3/ha |  |
| 61: |  |  |  |  |  |  |  |  |  |  |
| Udorthents----- |  |  |  |  |  |  | --- | --- | -- | Slash pine |
| Pits. |  |  |  |  |  |  |  |  |  |  |
| 65 : | 10W | Slight | Slight | Moderate | Slight | Moderate | Longleaf pine----------------Slash pine---- | 7080 | 610 | \|Slash pine |
| Garcon--------- |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Eunola--------- | 10W | \|Slight | Moderate | Slight | Slight | Moderate | Loblolly pine------- | 95 | 10 | ```Slash pine, loblolly pine, sweetgum, yellow-poplar``` |
|  |  |  |  |  |  |  | Slash pine | 95 | 12 |  |
|  |  |  |  |  |  |  | Sweetgum- | 95 | 8 |  |
|  |  |  |  |  |  |  | Yellow-poplar------ | 95 | 7 |  |
| 68 : | 10W | Slight | Moderate | Moderate | Slight | Moderate |  |  |  | $\begin{aligned} & \text { Slash pine, } \\ & \text { loblolly pine } \end{aligned}$ |
| Mascotte------- |  |  |  |  |  |  | Loblolly pine------\| | 80 | 8 |  |
|  |  |  |  |  |  |  | \| Longleaf pine------| | 70 | 6 |  |
|  |  |  |  |  |  |  | \|Slash pine---------| | 80 | 10 |  |
| Plummer-------- | 11W | Slight | \| Severe | Severe | Slight | Moderate | Loblolly pine | 91 | 9 | Loblolly pine, slash pine |
|  |  |  |  |  |  |  | \| Longleaf pine------- | 70 | 6 |  |
|  |  |  |  |  |  |  | \|Slash pine---------| | 88 | 11 |  |
| 69 : | 11W | Slight | \| Severe | Severe | Slight | Severe |  |  |  |  |
| Osier---------- |  |  |  |  |  |  | \| Loblolly pine------- | 87 | 9 | Slash pine, |
|  |  |  |  |  |  |  | \| Longleaf pine------- | 69 | 5 | loblolly pine |
|  |  |  |  |  |  |  | \|Slash pine---------| | 85 | 11 |  |
| Bibb----------- | 11W | Slight | \| Severe | Severe | Moderate | Severe | Atlantic white cedar | -- | --- | ```Loblolly pine, sweetgum, yellow-poplar, eastern cottonwood``` |
|  |  |  |  |  |  |  | \| Blackgum----------- | --- | -- |  |
|  |  |  |  |  |  |  | \| Loblolly pine------- | 100 | 11 |  |
|  |  |  |  |  |  |  | \| Sweetgum----------- | 90 | 7 |  |
|  |  |  |  |  |  |  | \| Water oak---------- | 90 | 6 |  |
|  |  |  |  |  |  |  | \| Yellow-poplar------- | --- | --- |  |
| Albany--------- | 10W | Slight | Moderate | Moderate | Slight | Moderate | Loblolly pine------- | 95 | 10 | Loblolly pine, slash pine |
|  |  |  |  |  |  |  | \| Longleaf pine------| | 80 | 7 |  |
|  |  |  |  |  |  |  | \|Slash pine---------| | 85 | 11 |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 5.--Forestland Management and Productivity--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

| Map symbol and soil name | Pct. <br> of <br> map <br> 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: Ocilla``` | 40 | Slight |  | Slight |  | Well suited |  |
| Albany | 30 | Slight |  | Slight |  | Well suited |  |
| Blanton-- | 18 | Slight |  | Slight |  | Well suited |  |
| 4: Blanton- | 85 | Slight |  |  | 0.50 | Moderately suited Slope | 0.50 |
| $5:$ <br> Blanton | 59 | Slight |  | Slight |  | Well suited |  |
| Bonneau- | 36 | \|Slight |  | Slight |  | \| Well suited |  |
| Bigbee- | 40 | Slight |  | Slight |  | Poorly suited Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ |
| Garcon-- | 30 | Slight |  | Slight |  | \| Poorly suited Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ |
| Meggett--- | 20 | Slight |  | Slight |  | Poorly suited <br> Ponding <br> Flooding <br> Wetness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 1.00 \end{aligned}\right.$ |
| 10: |  |  |  |  |  |  |  |
| Blanton-- | 45 | Slight |  | Slight |  | Poorly suited Flooding | 1.00 |
| Alpin | 38 | Slight |  | Slight |  | \| Poorly suited Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ |
| 11: |  |  |  |  |  |  |  |
| Bonneau- | 40 | Slight |  | Slight |  | Well suited |  |
| Blanton-- | 30 | Slight |  | Slight |  | Well suited |  |
| Padlock- | 20 | Slight |  | Slight |  | \|Moderately suited Sandiness | 0.50 |
| 12: |  |  |  |  |  |  |  |
| Blanton-- | 38 | Slight |  | ```\|Moderate ``` | 0.50 | Moderately suited slope | 0.50 |
| Chiefland-- | 28 | Slight |  | ```Moderate Slope/erodibility``` | 0.50 | Moderately suited Sandiness slope | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.50 \end{aligned}\right.$ |

Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued

| Map symbol and soil name | Pct. <br> 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 |
| 38: |  |  |  |  |  |  |  |
| Alpin- | 91 | Slight |  | Slight |  | \| Poorly suited Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ |
| $39 \text { : }$ |  |  |  |  |  |  |  |
| Sapelo- | 45 | Slight |  | Slight |  | Flooding | 1.00 |
|  |  |  |  |  |  | Wetness | 0.50 |
|  |  |  |  |  |  | Sandiness | 0.50 |
| Mascotte-------- | 30 | Slight |  | Slight |  | Poorly suited |  |
|  |  |  |  |  |  | Wetness | 0.50 |
|  |  |  |  |  |  | Sandiness | 0.50 |
| Albany--------- | 21 | Slight |  | Slight |  | Poorly suited Flooding | \| 1.00 |
| 41: |  |  |  |  |  |  |  |
| Fluvaquents----- | 40 | Slight |  | Slight |  | Poorly suited |  |
|  |  |  |  |  |  | Ponding | 1.00 |
|  |  |  |  |  |  | Flooding | 1.00 |
|  |  |  |  |  |  | Wetness | 1.00 |
|  |  |  |  |  |  | Sandiness | 0.50 |
| Meggett-------- | 30 | Slight |  | Slight |  | Poorly suited |  |
|  |  |  |  |  |  | Ponding | 1.00 |
|  |  |  |  |  |  | Flooding | 1.00 |
|  |  |  |  |  |  | Wetness | 1.00 |
| Bigbee---------- | 20 | Slight |  | Slight |  | $\begin{array}{\|l} \text { Poorly suited } \\ \text { Flooding } \\ \text { Sandiness } \end{array}$ |  |
|  |  |  |  |  |  |  | 1.00 |
|  |  |  |  |  |  |  | 0.50 |
| 43 : |  |  |  |  |  |  |  |
| Blanton------------ | 35 | Slight |  | Slight |  | Well suited |  |
| Foxworth------------ | 30 | Slight |  | Slight |  | Moderately suited Sandiness | 0.50 |
| Alpin----------- | 25 | Slight |  | Slight |  | Moderately suited Sandiness | 0.50 |
| 45: |  |  |  |  |  |  |  |
| Chipley--- | 55 | Slight |  | \| Slight |  | Moderately suited Sandiness | 0.50 |
| Foxworth----------- | 25 | Slight |  | Slight |  | Moderately suited Sandiness | 0.50 |
| Albany------------- | 15 | Slight |  | Slight |  | Well suited |  |
|  |  |  |  |  |  |  |  |
| Pamlico-------- | 40 | Very Severe Organic matter content high |  | Very Severe Organic matter content high | 1.00 | Poorly suited Ponding Low strength Wetness |  |
|  |  |  |  |  |  |  | $\begin{array}{\|l} 1.00 \\ 1.00 \end{array}$ |
|  |  |  |  |  |  |  | 11.00 |
|  |  |  |  |  |  |  |  |

Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued


Table 6.--Hazard of Erosion and Suitability for Roads on Forestland--Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \mid \text { unit } \end{gathered}\right.$ | 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 |
| 81: |  |  |  |  |  |  |  |
| Blanton- | 40 | Slight |  | Slight |  | Well suited |  |
| Bonneau---- | 30 | Slight |  | Slight |  | Well suited |  |
| Ichetucknee- | 20 | Slight |  | Slight |  | Well suited |  |
| $83 \text { : }$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Aquents--------- | 95 | Slight |  | Slight |  | Poorly suited Ponding | 1.00 |
|  |  |  |  |  |  | Flooding | 1.00 |
|  |  |  |  |  |  | Wetness | 1.00 |
|  |  |  |  |  |  | Sandiness |  |

## Table 7.--Forestland Site Preparation

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

| Map symbol and soil name | Pct. <br> 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: |  |  |  |  |  |
| Ocilla- | 40 | Well suited |  | Well suited |  |
| Albany--- | 30 | Well suited |  | Well suited |  |
| Blanton- | 18 | Well suited |  | Well suited |  |
| 4: |  |  |  |  |  |
| Blanton- | 85 | Well suited |  | Well suited |  |
| $5:$ |  |  |  |  |  |
| Blanton- | 59 | Well suited |  | Well suited |  |
| Bonneau- | 36 | Well suited |  | Well suited |  |
| 7 : |  |  |  |  |  |
| Bigbee-- | 40 | Well suited |  | \|Well suited |  |
| Garcon- | 30 | Well suited |  | Well suited |  |
| Meggett-- | 20 | Well suited |  | Well suited |  |
| 10: |  |  |  |  |  |
| Blanton----- | 45 | Well suited |  | Well suited |  |
| Alpin- | 38 | Well suited |  | Well suited |  |
| 11: |  |  |  |  |  |
| Bonneau-- | 40 | Well suited |  | Well suited |  |
| Blanton---- | 30 | Well suited |  | Well suited |  |
| Padlock- | 20 | Well suited |  | Well suited |  |
| 12: |  |  |  |  |  |
| Blanton---- | 38 | Well suited |  | Well suited |  |
| Chiefland--- | 28 | Well suited |  | \| Well suited |  |
| Ichetucknee- | 22 | Well suited |  | Well suited |  |
| 13: |  |  |  |  |  |
| Blanton-------- | 42 | Well suited |  | Well suited |  |
| Alpin- | 33 | Well suited |  | Well suited |  |
| Bonneau-- | 16 | Well suited |  | Well suited |  |
| 14: |  |  |  |  |  |
| Blanton-------- | 51 | Well suited |  | Well suited |  |
| Bonneau------- | 37 | Well suited |  | Well suited |  |

Table 7.--Forestland Site Preparation--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 15: |  |  |  |  |  |
| Blanton | 35 | Well suited |  | Well suited |  |
| Lynchburg- | 30 | Well suited |  | Well suited |  |
| Bonneau-- | 28 | Well suited |  | Well suited |  |
| 17: |  |  |  |  |  |
| Falmouth | 36 | Well suited |  | Well suited |  |
| Bonneau- | 30 | Well suited |  | Well suited |  |
| Blanton- | 22 | Well suited |  | Well suited |  |
| 18: |  |  |  |  |  |
| Otela- | 42 | Well suited |  | Well suited |  |
| Chiefland- | 30 | Well suited |  | Well suited |  |
| Ichetucknee- | 18 | Well suited |  | Well suited |  |
| 19: |  |  |  |  |  |
| Chiefland-- | 85 | Well suited |  | Well suited |  |
| 20: |  |  |  |  |  |
| Chiefland- | 55 | Well suited |  | Well suited |  |
| Pedro Variant- | 35 | \|Well suited |  | \|Well suited |  |
| 21: |  |  |  |  |  |
| Alaga- | 80 | Well suited |  | Well suited |  |
| 22: |  |  |  |  |  |
| Blanton- | 39 | \|Well suited |  | Well suited |  |
| Padlock- | 32 | Well suited |  | Well suited |  |
| Alpin- | 18 | Well suited |  | Well suited |  |
| $25:$ |  |  |  |  |  |
| Pantego- | 90 | $\begin{gathered} \text { Poorly suited } \\ \text { Wetness } \end{gathered}$ | 0.50 | Unsuited Wetness | 1.00 |
| 26: |  |  |  |  |  |
| Hurricane-- | 39 | \|Well suited |  | Well suited |  |
| Albany - | 32 | Well suited |  | Well suited |  |
| Chipley--- | 23 | \|Well suited |  | Well suited |  |
| $29:$ |  |  |  |  |  |
| 30: |  |  |  |  |  |
| Alpin---------- | 85 | \|Well suited |  | Well suited |  |
| 32: |  |  |  |  |  |
| Leon----------- | 80 | \|Well suited |  | Well suited |  |

Table 7.--Forestland Site Preparation--Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{gathered}\right.$ | Suitability for mechanical site preparation (surface) |  | Suitability for mechanical site preparation (deep) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 34: |  |  |  |  |  |
| Falmouth-- | 40 | Well suited |  | Well suited |  |
| Bonneau- | 30 | Well suited |  | Well suited |  |
| Blanton-- | 20 | Well suited |  | Well suited |  |
| $35:$ |  |  |  |  |  |
| Mascotte-- | 51 | Well suited |  | Well suited |  |
| Sapelo- | 30 | Well suited |  | Well suited |  |
| 38: |  |  |  |  |  |
| Alpin- | 91 | Well suited |  | Well suited |  |
| 39 : |  |  |  |  |  |
| Sapelo-- | 45 | \|Well suited |  | Well suited |  |
| Mascotte-- | 30 | Well suited |  | Well suited |  |
| Albany---- | 21 | Well suited |  | Well suited |  |
| 41: |  |  |  |  |  |
| Fluvaquents-- | 40 | Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| Meggett- | 30 | \|Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| Bigbee--------- | 20 | \| Well suited |  | Well suited |  |
| 43: |  |  |  |  |  |
| Blanton------- | 35 | \| Well suited |  | Well suited |  |
| Foxworth------- | 30 | Well suited |  | Well suited |  |
| Alpin----------- | 25 | Well suited |  | Well suited |  |
| 45 : |  |  |  |  |  |
| Chipley-------- | 55 | Well suited |  | Well suited |  |
| Foxworth-------- | 25 | Well suited |  | Well suited |  |
| Albany-- | 15 | \|Well suited |  | Well suited |  |
| 46 : |  |  |  |  |  |
| Pamlico-------- | 40 | \| Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| Olustee-------- | 32 | Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| Pottsburg----- | 25 | \| Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| 47: |  |  |  |  |  |
| Clara----------- | 55 | \| Well suited |  | Well suited |  |
| Meadowbrook----- | 35 | \| Well suited |  | Well suited |  |

Table 7.--Forestland Site Preparation--Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{gathered}\right.$ | Suitability for mechanical site preparation (surface) |  | Suitability for mechanical site preparation (deep) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \| Value | Rating class and limiting features | Value |
| 49: |  |  |  |  |  |
| Sapelo-------- | 60 | Well suited |  | Well suited |  |
| Mascotte- | 20 | Well suited |  | Well suited |  |
| Plummer---- | 16 | Well suited |  | Well suited |  |
| 51: |  |  |  |  |  |
| Plummer-- | 85 | Well suited |  | Well suited |  |
| 52: |  |  |  |  |  |
| Plummer- | 90 | Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| 54 : |  |  |  |  |  |
| Plummer- | 90 | Poorly suited Wetness | 0.50 | Unsuited Wetness | 1.00 |
| 59 : |  |  |  |  |  |
| Troup- | 90 | Well suited |  | Well suited |  |
| 60 : |  |  |  |  |  |
| Troup--------- | 85 | Well suited |  | Well suited |  |
| 61: |  |  |  |  |  |
| Udorthents-- | 80 | Well suited |  | Well suited |  |
| Pits- | 20 | Not rated |  | Not rated |  |
| 65: |  |  |  |  |  |
| Garcon-- | 55 | Well suited |  | Well suited |  |
| Eunola-- | 40 | Well suited |  | Well suited |  |
| 68 : |  |  |  |  |  |
| Mascotte- | 55 | Well suited |  | Well suited |  |
| Plummer-- | 35 | Well suited |  | Well suited |  |
| 69 : |  |  |  |  |  |
| Osier---------- | 45 | Well suited |  | Well suited |  |
| Bibb- | 27 | Well suited |  | Well suited |  |
| Albany - | 18 | Well suited |  | \|Well suited |  |
| 71: |  |  |  |  |  |
| Otela---------- | 42 | Well suited |  | Well suited |  |
| Alpin- | 35 | Well suited |  | Well suited |  |
| Chiefland- | 20 | Well suited |  | Well suited |  |

Table 7.--Forestland Site Preparation--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

| Map symbol and soil name | 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 : |  |  |  |  |  |  |  |
| Ocilla------------- \| | 40 | Slight |  | Well suited |  | Moderate |  |
| Albany------------ | 30 | Slight |  | \| Well suited |  | Moderate |  |
|  |  |  |  |  |  | Low strength | 0.50 |
| Blanton------------- | 18 | Moderate Sandiness | 0.50 | Well suited |  | Moderate <br> Low strength | 0.50 |
| 4: |  |  |  |  |  |  |  |
| Blanton------------ \| | 85 | Moderate Sandiness | 0.50 | $\begin{aligned} & \text { Moderately suited } \\ & \text { Slope } \end{aligned}$ | 0.50 | Moderate <br> Low strength | 0.50 |
| 5 : |  |  |  |  |  |  |  |
| Blanton------------ | 59 | Moderate Sandiness | 0.50 | Well suited |  | Moderate <br> Low strength | 0.50 |
| Bonneau------------ \| | 36 | Slight |  | \|Well suited |  | Moderate <br> Low strength | 0.50 |
| $7 \text { : }$ <br> Bigbee |  |  | 1.00 <br> 0.50 |  | 11.00 |  |  |
|  | 40 | $\begin{array}{\|l} \mid \text { Severe } \\ \text { Flooding } \\ \text { Sandiness } \end{array}$ |  | $\left\lvert\, \begin{aligned} & \text { Poorly suited } \\ & \text { Flooding } \\ & \text { Sandiness } \end{aligned}\right.$ |  | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | 0.50 |  |  |
| Garcon------------- | 30 | $\begin{array}{\|l} \text { Severe } \\ \text { Flooding } \\ \text { Sandiness } \end{array}$ | 1.000 | $\left\lvert\, \begin{aligned} & \text { Poorly suited } \\ & \text { Flooding } \\ & \text { Sandiness } \end{aligned}\right.$ | $1.00$ | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Meggett------------ | 20 | Severe Flooding | 1.00 | Poorly suited <br> Ponding <br> Flooding <br> Wetness | $\begin{aligned} & 1.00 \\ & 1.00 \\ & 1.00 \end{aligned}$ | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 10: |  |  |  |  |  |  |  |
| Blanton------------ | 45 | Severe Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ | $\begin{aligned} & \text { Poorly suited } \\ & \text { Flooding } \end{aligned}$ | 1.00 | Moderate <br> Low strength |  |
|  |  |  |  |  |  |  | 0.50 |
|  |  |  |  |  |  |  |  |
| Alpin------------- | 38 | Severe Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ | Poorly suited Flooding Sandiness | $\begin{aligned} & 1.00 \\ & 0.50 \end{aligned}$ | Moderate <br> Low strength |  |
|  |  |  |  |  |  |  | 0.50 |
|  |  |  |  |  |  |  |  |
| 11: |  |  |  |  |  |  |  |
| Bonneau------------ | 40 | Slight |  | \| Well suited |  | Moderate <br> Low strength | 0.50 |
| Blanton------------ | 30 | Moderate Sandiness | 0.50 | Well suited |  | Moderate <br> Low strength | 0.50 |

Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 41: |  |  |  |  |  |  |  |
| Bigbee---------- | 20 | Severe |  | Poorly suited |  | Moderate | 0.50 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Low strength |  |
|  |  | Sandiness | 0.50 | Sandiness | 0.50 |  |  |
| 43: |  |  |  |  |  |  |  |
| Blanton--------- | 35 | Moderate Sandiness | 0.50 | Well suited |  | Moderate | 0.50 |
|  |  |  |  |  |  | Low strength |  |
| Foxworth--------Alpin----------- | 30 | Moderate Sandiness | 0.50 | \| Moderately suited Sandiness | 0.50 | Moderate <br> Low strength | 0.50 |
|  | 25 | Moderate |  | Moderately suited |  | Moderate |  |
|  |  | Sandiness | 0.50 | Sandiness | 0.50 | Low strength | 0.50 |
| 45 : |  |  |  |  |  |  |  |
| Chipley--------- | 55 | Moderate Sandiness | 0.50 | Moderately suited Sandiness | 0.50 | Moderate <br> Low strength | 0.50 |
| Foxworth-------- | 25 | Moderate Sandiness | 0.50 | Moderately suited <br> Sandiness | 0.50 | Moderate Low strength | 0.50 |
| Albany---------- | 15 | Slight |  | Well suited |  | Moderate | 0.50 |
|  |  |  |  |  |  | Low strength |  |
| 46:Pamlico- |  |  |  |  | 1.00 |  |  |
|  | 40 | Slight |  | \| Poorly suited Ponding Low strength Wetness |  | \| Severe | 1.00 |
|  |  |  |  |  |  | Low strength |  |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  | 1.00 |  |  |
| Olustee--------- | 32 | Slight |  | Poorly suited |  | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| Pottsburg------- | 25 | Moderate Sandiness | 0.50 | Poorly suited |  | Moderate <br> Low strength | 0.50 |
|  |  |  |  | Ponding | 1.00 |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| 47: |  |  |  |  |  |  |  |
| Clara---------- | 55 | Severe Flooding Sandiness | 11.00 | Poorly suited |  | Severe |  |
|  |  |  |  | \| Ponding | 1.00 |  | 1.00 |
|  |  |  | 0.50 | Flooding | 1.00 |  |  |
|  |  |  |  | Low strength | 1.00 |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| Meadowbrook----- | 35 | Severe Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ | Poorly suited |  | Moderate <br> Low strength |  |
|  |  |  |  |  |  | 0.50 |  |
|  |  |  |  | Flooding | 1.00 |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
|  |  |  |  |  |  |  |  |

Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--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 |
| 68 : |  |  |  |  |  |  |  |
| Mascotte----------- | 55 | Severe |  | Poorly suited |  | Moderate | 0.50 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Low strength |  |
|  |  | Sandiness | 0.50 | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| Plummer------------ | 35 | Severe |  | Poorly suited |  | Moderate | 0.50 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Low strength |  |
|  |  | Sandiness | 0.50 | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| 69 : |  |  |  |  |  |  |  |
| Osier-------------- | 45 | \|Severe |  | Poorly suited |  | Moderate | 0.50 |
|  |  |  | 1.00 |  |  | Low strength |  |
|  |  | Sandiness | 0.50 | Flooding | 1.00 |  |  |
|  |  |  |  | Wetness | 0.50 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| Bibb--------------- | 27 | Severe |  | Poorly suited |  | Severe |  |
|  |  | Flooding | 1.00 | Ponding | 1.00 | Low strength | 1.00 |
|  |  | Low strength | 0.50 | Flooding | 1.00 |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Low strength | 0.50 |  |  |
| Albany------------ | 18 | Severe Flooding | 11.00 | Poorly suited Flooding | 1.00 | Moderate Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
| $71:$Otela | 42 |  | 0.50 |  |  | Moderate |  |
|  |  | Moderate Sandiness |  | Well suited |  |  | 0.50 |
|  |  |  |  |  |  | Low strength |  |
| Alpin-------------- | 35 | Moderate Sandiness | 0.50 | \|Moderately suited Sandiness | 0.50 | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
| Chiefland---------- | 20 | Moderate Sandiness | 0.50 | \|Moderately suited Sandiness | 0.50 | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
| 72: | 30 |  |  |  |  |  |  |
|  |  | Severe |  | Poorly suited |  | Moderate | 0.50 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Low strength |  |
|  |  | Sandiness | 0.50 | Sandiness | 0.50 |  |  |
| Blanton------------ | 28 | Severe Flooding Sandiness | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.50 \end{aligned}\right.$ | Poorly suited Flooding | 1.00 | Moderate <br> Low strength | 0.50 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Fluvaquents-------- | 26 | Severe Flooding Sandiness | $\begin{aligned} & 1.00 \\ & 0.50 \end{aligned}$ | Poorly suited |  | Moderate <br> Low strength |  |
|  |  |  |  | Ponding | 1.00 |  | 0.50 |
|  |  |  |  | Flooding | 1.00 |  |  |
|  |  |  |  | Wetness | 1.00 |  |  |
|  |  |  |  | Sandiness | 0.50 |  |  |
| 73 : |  |  |  |  |  |  |  |
| Boulogne---------- | 35 | Slight |  | Moderately suited Wetness | 0.50 | Moderate Low strength | 0.50 |
| Chipley------------ | 30 | Moderate Sandiness | 0.50 | Moderately suited Sandiness | 0.50 | Moderate <br> Low strength | 0.50 |

Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 8.--Haul Roads, Log Landings, and Soil Rutting on Forestland--Continued


Table 9.--Camp Areas, Picnic Areas, and Playgrounds
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]


Table 9.--Camp Areas, Picnic Areas, and Playgrounds-Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Camp areas |  | Picnic areas |  | Playgrounds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 10: |  |  |  |  |  |  |  |
| Blanton------------ | 45 | \|Very limited Flooding Too sandy | 1.00 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy Flooding slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.60 \\ & 0.12 \end{aligned}\right.$ |
| Alpin-------------- | 38 | Very limited |  | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  |  | Too sandy |  | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Flooding | 0.60 |
|  |  |  |  |  |  |  | slope | 0.12 |
| 11: |  |  |  |  |  |  |  |
| Bonneau------------ | 40 | Very limited Too sandy |  | Very limited |  | \| Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Blanton------------- | 30 | Very limited Too sandy |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | slope | 0.12 |
| Padlock------------ | 20 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Slow water movement | 0.96 | Slow water movement | 0.96 | Slow water movement | 0.96 |
|  |  | Depth to | 0.39 | Depth to | 0.19 | Depth to | 0.39 |
|  |  |  |  |  |  | slope | 0.12 |
| 12: |  |  |  |  |  |  |  |
| Blanton------------ | 38 | Very limited Too sandy |  | Very limited Too sandy |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | slope | 1.00 |
| Chiefland---------- | 28 | Very limited Too sandy |  | Very limited Too sandy |  | Very limited Too sandy slope |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  |  |  |  |  | 1.00 |
| Ichetucknee-------- | 22 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Slow water | 0.96 | Slow water | 0.96 | Slope | 1.00 |
|  |  | movement |  | movement |  | Slow water | 0.96 |
|  |  | Depth to | 0.39 | Depth to | 0.19 | movement |  |
|  |  | saturated zone |  | saturated zone |  | Depth to saturated zone | 0.39 |
| 13: |  |  |  |  |  |  |  |
| Blanton----------- | 42 | Very limited Too sandy |  | Very limited Too sandy |  | Very limited Too sandy Slope |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  |  |  |  |  | 0.12 |
| Alpin-------------- | 33 | Very limited Too sandy |  | Very limited Too sandy |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Bonneau------------- | 16 | Very limited Too sandy |  | Very limited Too sandy | 1.00 | Very limited Too sandy Slope |  |
|  |  |  | 1.00 |  |  |  | 1.00 |
|  |  |  |  |  |  |  | 0.12 |
|  |  |  |  |  |  |  |  |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued


Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Camp areas |  | Picnic areas |  | Playgrounds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \|Value | Rating class and limiting features | Value | Rating class and limiting features | \|Value |
| 19: |  |  |  |  |  |  |  |
| Chiefland------- | 85 | Very limited |  | Very limited | 1.00 | Very limited |  |
|  |  | Flooding | 1.00 | Too sandy |  | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Flooding | 0.60 |
| Chiefland------- | 55 | \|Very limited |  | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  | 1.00 |  |  | Too sandy | 1.00 |
|  |  |  | 1.00 |  |  | Flooding | 0.60 |
| Pedro Variant---- | 35 | Very limited |  | Very limited | 1.00 | Very limited |  |
|  |  | Flooding | 1.00 | Too sandy |  | Depth to bedrock | 1.00 |
|  |  | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Flooding | 0.60 |
| 21: |  |  |  |  |  |  |  |
| Alaga- | 80 | Somewhat limited Too sandy |  | Somewhat limitedToo sandy | 0.88 | Somewhat limited |  |
|  |  |  | 0.88 |  |  | Too sandy | 0.88 |
|  |  |  |  |  |  | Slope | 0.12 |
| 22: |  |  |  |  |  |  |  |
| Blanton--------- | 39 | Very limited Too sandy |  | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  | 1.00 |  |  | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Padlock--------- | 32 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Slow water movement | 0.96 | Slow water movement | 0.96 | Slow water movement | 0.96 |
|  |  | Depth to saturated zone | 0.39 | Depth to saturated zone | 0.19 | Depth to saturated zone | 0.39 |
|  |  |  |  |  |  | slope | 0.12 |
| Alpin----------- | 18 | Very limited Too sandy |  | Very limitedToo sandy | 1.00 | Very limited Too sandy slope |  |
|  |  |  | 1.00 |  |  |  | 1.00 |
|  |  |  |  |  |  |  | 0.12 |
| $25:$ |  |  |  |  |  |  |  |
| Pantego--------- | 90 | Very limited |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Ponding | 1.00 | Depth to saturated zone Ponding | 1.00 |
|  |  | Depth to saturated zone Ponding |  | Depth to | 1.00 |  |  |
|  |  |  | 1.00 | saturated zone |  |  | 1.00 |
| 26: |  |  |  |  |  |  |  |
| Hurricane------- | 39 | Very limitedToo sandy |  | Very limitedToo sandy | 1.00 | Very limited |  |
|  |  |  | 1.00 |  |  | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Albany | 32 | Very limitedToo sandy |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Depth to saturated zone | 0.39 | Depth to saturated zone | 0.19 | Depth to saturated zone Slope | $\left\lvert\, \begin{aligned} & 0.39 \\ & 0.12\end{aligned}\right.$ |
| Chipley--------- | 23 | Very limited Too sandy |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
|  |  |  |  |  |  |  |  |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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: |  |  |  |  |  |  |  |
| Alpin- | 80 | Very limited Too sandy | 1.00 | \|Very limited Too sandy | 1.00 | \|Very limited Too sandy Slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| 30 : |  |  |  |  |  |  |  |
| Alpin----------- | 85 | Very limitedToo sandySlope |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Too sandy | 11.00 |
|  |  |  | 0.04 | Slope | 0.04 | Slope | 1.00 |
| 32: |  |  |  |  |  |  |  |
| Leon------------ | 80 | Very limited |  | \| Very limited |  | \| Very limited |  |
|  |  | Depth to | 1.00 | Too sandy | 1.00 | Depth to | 11.00 |
|  |  | saturated zone Too sandy | 1.00 | Depth to saturated zone | 1.00 | saturated zone Too sandy | 1.00 |
| 34 : |  |  |  |  |  |  |  |
| Falmouth-------- | 40 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 11.00 | Too sandy | 1.00 |
|  |  | Slow water | 0.98 | Slow water | 0.98 | Slope | 1.00 |
|  |  | movement |  | movement |  | Slow water | 0.98 |
|  |  | Depth to saturated zone | 0.39 | Depth to saturated zone | 0.19 | movement <br> Depth to saturated zone | 0.39 |
| Bonneau-------- | 30 | Very limited Too sandy |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 |  | \| 1.00 | Too sandy | \| 1.00 |
|  |  |  |  |  |  | Slope | 1.00 |
| Blanton--------- | 20 | Very limited Too sandy |  | Very limited Too sandy |  | Very limited Too sandy Slope |  |
|  |  |  | 1.00 |  | 1.00 |  | 11.00 |
|  |  |  |  |  |  |  | \| 1.00 |
| $35:$ |  |  |  |  |  |  |  |
| Mascotte-------- | 51 | Very limited |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Depth to | 1.00 |
|  |  | saturated zone Too sandy | 1.00 | Depth to saturated zone | 1.00 | saturated zone Too sandy | 1.00 |
| Sapelo | 30 | ```Very limited Depth to saturated zone Too sandy``` |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Depth to | 11.00 |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | saturated zone Too sandy | 1.00 |
| $38:$ |  |  |  |  |  |  |  |
| Alpin----------- | 91 | Very limited Flooding Too sandy |  | Very limited Too sandy |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 11.00 |
|  |  |  | 1.00 |  |  | Flooding | 0.60 |
|  |  |  |  |  |  | slope | 0.12 |
| 39 : |  |  |  |  |  |  |  |
| Sapelo---------- | 45 | \| Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Too sandy | \| 1.00 | Depth to | \| 1.00 |
|  |  | saturated zone |  | Depth to | 1.00 | saturated zone |  |
|  |  | Flooding | 1.00 | saturated zone |  | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 | Flooding | 0.40 | Flooding | 1.00 |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued


Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Camp areas |  | Picnic areas |  | Playgrounds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \|Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 45 : |  |  |  |  |  |  |  |
| Albany---------- | 15 | Very limited |  | \|Very limited | 1.00 | Very limited | 1.00 |
|  |  | Too sandy | $\begin{aligned} & 1.00 \\ & 0.39 \end{aligned}$ | Too sandy |  | Too sandy |  |
|  |  | Depth to saturated zone |  | Depth to saturated zone | 0.19 | Depth to saturated zone | 0.39 |
|  |  |  |  |  |  | slope | 0.12 |
| 46 : |  |  |  |  |  |  |  |
| Pamlico--------- | 40 | Very limited | 1.00 | Very limited | 1.00 | Very limited |  |
|  |  | Depth to saturated zone Ponding |  | Ponding |  | Depth to | 1.00 |
|  |  |  |  | Depth to | 1.00 |  |  |
|  |  |  | $1.00$ | saturated zone |  | Organic matter | 1.00 |
|  |  | Organic matter content | 1.00 | Organic matter content | 1.00 | content <br> Ponding | 1.00 |
| Olustee--------- | 32 | Very limited | 1.00 | \| Very limite | 1.00 | Very limited |  |
|  |  |  |  |  |  |  | 1.00 |
|  |  | saturated zone |  | Ponding | 1.00 | saturated zone |  |
|  |  | Ponding | 1.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 | saturated zone |  | Ponding | 1.00 |
| Pottsburg------- | 25 | Very limited | 1.00 | Very limited | 1.00 | Very limited | 1.00 |
|  |  |  |  | Too sandy |  | Depth to saturated zone |  |
|  |  | saturated zone Ponding |  | Ponding | 1.00 |  |  |
|  |  |  | 1.00 | saturated zone | 1.00 | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Ponding | 1.00 |
| 47: |  |  |  |  |  |  |  |
| Clara | 55 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Ponding <br> Depth to | 1.00 | Depth to | 1.00 |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | saturated zone Flooding |  |
|  |  | Ponding | 1.00 | Flooding | 0.40 | Ponding | 1.00 |
| Meadowbrook----- | 35 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ | \| 1.00 | Very limited |  | Very limited | 1.00 |
|  |  |  |  | Too sandy | 1.00 | Depth to saturated zone |  |
|  |  |  |  | Ponding | 1.00 |  |  |
|  |  | Flooding | 1.00 | Depth to saturated zone | 1.00 | saturated zone Too sandy | 1.00 |
|  |  |  | 1.00 |  |  | Flooding | 1.00 |
|  |  | Too sandy | 1.00 | saturated zone Flooding | 0.40 | Ponding | 1.00 |
| 49 : |  |  |  |  |  |  |  |
| Sapelo- | 60 | ```Very limited Depth to saturated zone Too sandy``` | 1.00 | ```\| Very limited Too sandy Depth to saturated zone``` | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ | Very limited |  |
|  |  |  |  |  |  | Depth to | 1.00 |
|  |  |  | 11.00 |  |  | Too sandy | 1.00 |
| Mascotte-------- | 20 | Very limited Depth to saturated zone Too sandy |  | ```\|Very limited Too sandy Depth to saturated zone``` | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ | Very limited Depth to saturated zone Too sandy |  |
|  |  |  | 1.00 |  |  |  | 1.00 |
|  |  |  | 1.00 |  |  |  | 1.00 |
| Plummer- | 16 | ```Very limited Depth to saturated zone Too sandy``` |  | ```\|Very limited Too sandy Depth to saturated zone``` | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ | ```Very limited Depth to saturated zone Too sandy``` |  |
|  |  |  | 1.00 |  |  |  | 1.00 |
|  |  |  | 1.00 |  |  |  | 1.00 |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds-Continued


Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Camp areas |  | Picnic areas |  | Playgrounds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 69 : |  |  |  |  |  |  |  |
| Osier----------- | 45 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth tosaturated zone | 1.00 | Ponding | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
|  |  | Flooding | 1.00 | saturated zone |  | Flooding | 1.00 |
|  |  | Ponding | 1.00 | Too sandy | 0.99 | Ponding | 1.00 |
|  |  | Too sandy | 0.99 | Flooding | 0.40 | Too sandy | 0.99 |
| Bibb------------ | 27 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Ponding | 1.00 |  | 1.00 |
|  |  | saturated zone |  | Depth to | 1.00 | saturated zone |  |
|  |  | Flooding | 1.00 | saturated zone |  | Flooding | 1.00 |
|  |  | Ponding | 1.00 | Flooding | 0.40 | Ponding | 1.00 |
| Albany---------- | 18 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 | Depth to | 0.19 | Flooding | 0.60 |
|  |  | Depth to saturated zone | 0.39 | saturated zone |  | Depth to saturated zone | 0.39 |
|  |  |  |  |  |  | slope | 0.12 |
| 71: |  |  |  |  |  |  |  |
| Otela----------- | 42 | \|Very limited Too sandy | 1.00 | Very limitedToo sandy | 1.00 | Very limited |  |
|  |  |  |  |  |  | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Alpin---------- | 35 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  |  |  |  | Too sandy | 1.00 |
|  |  |  |  |  |  | Slope | 0.12 |
| Chiefland------- | 20 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  |  |  |  | Too sandy | 1.00 |
|  |  |  |  |  |  | slope | 0.12 |
| 72 : |  |  |  |  |  |  |  |
| Ousley---------- | 30 | Very limitedFloodingToo sandy |  | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  | 1.00 |  |  | Too sandy | 1.00 |
|  |  |  | 1.00 |  |  | Flooding | 0.60 |
|  |  |  |  |  |  | Slope | 0.12 |
| Blanton--------- | 28 | Very limited |  | Very limited | 1.00 | Very limited |  |
|  |  | Flooding | 1.00 | Too sandy |  | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Flooding | 0.60 |
|  |  |  |  |  |  | Slope | 0.12 |
| Fluvaquents----- | 26 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Too sandy | 1.00 | Depth to | 1.00 |
|  |  | saturated zone |  | Ponding | 1.00 | saturated zone |  |
|  |  | Flooding | 1.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  | Ponding | 1.00 | saturated zone |  | Ponding | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Flooding | 0.60 |
| 73 : |  |  |  |  |  |  |  |
| Boulogne------- | 35 | Very limited  <br> Depth to  |  | Very limited |  | Very limited |  |
|  |  |  |  | Too sandy <br> Depth to | 1.00 | Depth to | 1.00 |
|  |  | Depth to saturated zone Too sandy | 1.00 | Depth to | 1.00 | saturated zone |  |
|  |  | Slow water movement | 0.94 | Slow water movement | 0.94 | Too sandy <br> Slow water | 1.00 0.94 |
|  |  |  |  |  |  | Slow water movement | 0.94 |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds--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 |
| 73: |  |  |  |  |  |  |  |
| Chipley-------- | 30 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy Slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| Hurricane------ | 20 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy Slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| $74 \text { : }$ |  |  |  |  |  |  |  |
| Surrency------- | 35 | Depth to saturated zone | 1.00 | Too sandy Ponding | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ | Depth to saturated zone | 1.00 |
|  |  | Flooding | 1.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  | Ponding | 1.00 | saturated zone |  | Flooding | 1.00 |
|  |  | Too sandy | 1.00 | Flooding | 0.40 | Ponding | 1.00 |
| Plummer-------- | 30 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Too sandy | 1.00 | Depth to | 1.00 |
|  |  | saturated zone |  | Ponding | 1.00 | saturated zone |  |
|  |  | Flooding | 1.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  | Ponding | 1.00 | saturated zone |  | Flooding | 1.00 |
|  |  | Too sandy | 1.00 | Flooding | 0.40 | Ponding | 1.00 |
| Cantey--------- | 25 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Ponding | 1.00 | Depth to | 1.00 |
|  |  | saturated zone Flooding | 1.00 | Depth to saturated zone | 1.00 | saturated zone Flooding | 1.00 |
|  |  | Ponding | 1.00 | Slow water | 0.96 | Ponding | 1.00 |
|  |  | Slow water movement | 0.96 | movement Too sandy | 0.50 | Slow water movement | 0.96 |
|  |  | Too sandy | 0.50 | Flooding | 0.40 | Too sandy | 0.50 |
| 76 : |  |  |  |  |  |  |  |
| Wampee---------- | 51 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Too sandy | 0.99 | Too sandy | 0.99 | slope | 1.00 |
|  |  | Depth to | 0.39 | Depth to | 0.19 | Too sandy | 0.99 |
|  |  | saturated zone Slope | 0.01 | saturated zone Slope | 0.01 | Depth to saturated zone | 0.39 |
| Blanton-------- | 38 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Too sandy | 1.00 |
|  |  | Slope | 0.01 | Slope | 0.01 | Slope | 1.00 |
| 77 : |  |  |  |  |  |  |  |
| Wampee--------- | 65 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Too sandy | 0.99 | Too sandy | 0.99 | Slope | 1.00 |
|  |  | Depth to | 0.99 | Slope | 0.91 | Too sandy | 0.99 |
|  |  | saturated zone Slope | 0.91 | Depth to saturated zone | 0.78 | Depth to ${ }^{\text {saturated zone }}$ | 0.99 |
| Blanton--------- | 30 | Very limited Too sandy Slope |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Slope | 1.00 |
|  |  |  | 0.91 | Slope | 0.91 | Too sandy | 1.00 |
| 79: |  |  |  |  |  |  |  |
| Blanton-- | 87 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy Slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |

Table 9.--Camp Areas, Picnic Areas, and Playgrounds--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Camp areas |  | Picnic areas |  | Playgrounds |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 80 : |  |  |  |  |  |  |  |
| Bonneau- | 80 | \|Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| 81: |  |  |  |  |  |  |  |
| Blanton------- | 40 | \|Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| Bonneau--------- | 30 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Too sandy slope | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.12 \end{aligned}\right.$ |
| Ichetucknee----- | 20 | Very limitedToo sandy |  | Very limitedToo sandy |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  | Slow water movement | 0.96 | Slow water movement | 0.96 | Slow water movement | 0.96 |
|  |  | Depth to saturated zone | 0.39 | Depth to saturated zone | 0.19 | Depth to saturated zone slope | $\left\lvert\, \begin{aligned} & 0.39 \\ & 0.12\end{aligned}\right.$ |
| $83 \text { : }$ |  |  |  |  |  |  |  |
| Aquents--------- | 95 | Very limited | 1.00 | Very limitedToo sandy |  | Very limited | 1.00 |
|  |  |  |  |  | 1.00 | Depth to saturated zone |  |
|  |  | Depth to saturated zone |  | Too sandy Ponding | 1.00 |  |  |
|  |  | Flooding | 1.00 | Depth to saturated zone Flooding | 1.00 | Too sandy | 1.00 |
|  |  | Ponding | 1.00 |  |  | Flooding | 1.00 |
|  |  | Too sandy | 1.00 |  | 0.40 | Ponding | 1.00 |

Table 10.--Paths, Trails, and Golf Fairways
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 : |  |  |  |  |  |  |  |
| Ocilla---------- | 40 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited <br> Droughty <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.59 \\ & 0.19 \end{aligned}\right.$ |
| Albany--------- | 30 | Very limited Too sandy | 1.00 | \| Very limited | 1.00 | Very limited <br> Droughty <br> Depth to saturated zone |  |
|  |  |  |  | Too sandy |  |  | 1.00 |
|  |  |  |  |  |  |  | 0.19 |
| Blanton--------- | 18 | Very limited Too sandy | 1.00 | Very limitedToo sandy | 1.00 | Very limited Droughty | 0.99 |
|  |  |  |  |  |  |  |  |
| 4: |  |  |  |  |  |  |  |
| Blanton-------- | 85 | Very limited Too sandy | 11.00 | Very limited Too sandy | 1.00 | Very limited Droughty | 0.99 |
| 5 : |  |  |  |  |  |  |  |
| Blanton--------Bonneau-------- | 59 | Very limited Too sandy | \| 1.00 | Very limited Too sandy | 1.00 | Very limited Droughty | 0.99 |
|  | 36 | Very limited |  | Very limited |  | Somewhat limited |  |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Droughty | 0.29 |
| 7 : |  |  |  |  |  |  |  |
| Bigbee--------- | 40 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited |  |
|  |  |  |  |  |  | Droughty | 0.62 |
|  |  |  |  |  |  | Flooding | 0.60 |
| Garcon---------- | 30 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited <br> Flooding Depth to saturated zone |  |
|  |  |  |  |  |  |  | 0.19 |
|  |  |  |  |  |  |  |  |
| Meggett-------- | 20 | Very limited Depth to saturated zone Ponding Too sandy | 1.00 | Very limite | 1.00 | Very limited |  |
|  |  |  |  | Depth to |  | Ponding | 1.00 |
|  |  |  |  | saturated zone |  | Depth to | 1.00 |
|  |  |  | 1.00 | Ponding | 1.00 | saturated zone |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Flooding | 0.60 |
| 10: |  |  |  |  |  |  |  |
| Blanton--------- | 45 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  |  |  |  | Droughty | 0.99 |
|  |  |  |  |  |  | Flooding | 0.60 |
| Alpin---------- | 38 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited Droughty Flooding |  |
|  |  |  |  |  |  |  | 0.87 |
|  |  |  |  |  |  |  | 0.60 |
| 11: |  |  |  |  |  |  |  |
| Bonneau---- | 40 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.29 |

Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 10.--Paths, Trails, and Golf Fairways--Continued

| $\begin{aligned} & \text { Map symbol } \\ & \text { and soil name } \end{aligned}$ | Pct. of map unit | Paths and trails |  | Off-road <br> motorcycle trails |  | Golf fairways |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \| Value | Rating class and limiting features | \|Value | Rating class and limiting features | \|Value |
| 18 : |  |  |  |  |  |  |  |
| Otela- | 42 | \|Very limited Too sandy | 1.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.34 |
| Chiefland------- | 30 | Very limited Too sandy |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Too sandy | 1.00 | Droughty | 1.00 |
| Ichetucknee----- | 18 | \| Very limited | \| 1.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Depth to saturated zone | 0.19 |
| Chiefland------ | 19: |  |  |  |  |  |  |
|  | 85 | \|Very limited Too sandy | 1.00 | Too sandy | 1.00 | Droughty | 1.00 |
|  |  |  |  |  |  | Flooding | 0.60 |
| Chiefland------- | 55 | Very limited Too sandy | 1.00 | \| Very limited | 1.00 | Very limited |  |
|  |  |  |  |  |  | Droughty | 1.00 |
|  |  |  |  |  |  | Flooding | 0.60 |
| Pedro Variant--- | 35 | Very limited Too sandy | 1.00 | \| Very limited | 1.00 | Very limited <br> Depth to bedrock <br> Droughty <br> Flooding |  |
|  |  |  |  |  |  |  | 1.00 |
|  |  |  |  |  |  |  | 1.00 |
|  |  |  |  |  |  |  | 0.60 |
| 21: |  |  |  |  |  |  |  |
| Alaga- | 80 | Somewhat limited Too sandy | 0.88 | Somewhat limited Too sandy | 0.88 | Somewhat limited Droughty | 0.69 |
| 22: |  |  |  |  |  |  |  |
| Blanton------------ | 39 | Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Very limited Droughty | 0.99 |
| Padlock-------- | 32 | Very limited Too sandy | 1.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Depth to saturated zone | 0.19 |
| Alpin---------- | 18 | Very limited Too sandy | 11.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.87 |
| $25:$ <br> Pantego |  |  |  |  |  |  |  |
|  | 90 | ```Very limited Depth to saturated zone Ponding``` |  | Very limited |  | \| Very limited |  |
|  |  |  | 1.00 | Depth to | 1.00 | Ponding | 1.00 |
|  |  |  |  | saturated zone |  | Depth to | 1.00 |
|  |  |  | 1.00 | Ponding | 1.00 | saturated zone |  |
| 26: |  |  |  |  |  |  |  |
| Hurricane- | 39 | \| Very limited | 1.00 | \|Very limited Too sandy | 1.00 | Very limited |  |
|  |  |  |  |  |  | Droughty | 0.99 |
| Albany--------- | 32 | Very limited Too sandy | 1.00 | $\begin{gathered} \text { Very limited } \\ \text { Too sandy } \end{gathered}$ | 1.00 | ```Very limited Droughty Depth to saturated zone``` | 1.00 |
|  |  |  |  |  |  |  | 0.19 |
| Chipley-- | 23 | \|Very limited Too sandy | 1.00 | Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.87 |

Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 10.--Paths, Trails, and Golf Fairways--Continued

| Map symbol and soil name | $\left\|\begin{array}{c} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}\right\|$ | 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 |
| 47: |  |  |  |  |  |  |  |
| Clara-------------- | 55 | \| Very limited |  | \| Very limited |  | \|Very limited |  |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Ponding | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Flooding | 1.00 |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Depth to | 1.00 |
|  |  | Flooding | 0.40 | Flooding | 0.40 | saturated zone |  |
| Meadowbrook-------- | 35 | \|Very limited | |  | \| Very limited |  | \| Very limited |  |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Ponding | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Flooding | 1.00 |
|  |  | Too sandy | 1.00 | Too sandy | 1.00 | Depth to | 1.00 |
|  |  | Ponding | 1.00 | Ponding | 1.00 | saturated zone |  |
|  |  | Flooding | 0.40 | Flooding | 0.40 | Droughty | 0.95 |
| 49: |  |  |  |  |  |  |  |
| Sapelo------------- | 60 | ```Very limited Depth to saturated zone Too sandy``` |  | ```Very limited Depth to saturated zone Too sandy``` |  | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  | 1.00 |  | 1.00 |  |  |
| Mascotte----------- \| | 20 | ```\|Very limited Depth to saturated zone Too sandy``` |  | \|Very limited |  | \| Very limited |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  | 1.00 | Too sandy | 1.00 |  |  |
| Plummer------------ | 16 | ```Very limited Depth to saturated zone Too sandy``` |  | ```Very limited Depth to saturated zone Too sandy``` |  | \| Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  | 1.00 |  | 1.00 | Droughty | 0.92 |
| 51: |  |  |  |  |  |  |  |
| Plummer------------ | 85 | ```Very limited Depth to saturated zone Too sandy``` |  | ```Very limited Depth to saturated zone Too sandy``` |  | \| Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Depth to | 1.00 |
|  |  |  | 1.00 |  | 1.00 | Droughty | 0.92 |
| 52 : |  |  |  |  |  |  |  |
| Plummer------------ | 90 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to saturated zone Too sandy | 1.00 | Depth to saturated zone | 1.00 | Ponding | 1.00 |
|  |  |  |  |  |  | Depth to | 1.00 |
|  |  |  | 1.00 | Too sandy | 1.00 | saturated zone |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Droughty | 0.92 |
| 54 : |  |  |  |  |  |  |  |
| Plummer------------ | 90 | Very limited |  | Very limited |  | \| Very limited |  |
|  |  | Depth to saturated zone Ponding | 1.00 | Depth to saturated zone Ponding | 1.00 | Ponding | 1.00 |
|  |  |  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  | 1.00 |  | 1.00 | saturated zone Droughty | 0.04 |
| 59 : |  |  |  |  |  |  |  |
| Troup-------------- | 90 | Very limited Too sandy | 1.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.34 |
| 60 : |  |  |  |  |  |  |  |
| Troup-------------- | 85 | Very limited Too sandy | 1.00 | \|Very limited Too sandy | 1.00 | Somewhat limited Droughty | 0.34 |

Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 10.--Paths, Trails, and Golf Fairways--Continued


Table 11.--Wildlife Habitat


Soil Survey of Suwannee County, Florida

Table 11.--Wildlife Habitat--Continued


Soil Survey of Suwannee County, Florida

Table 11.--Wildlife Habitat--Continued


Soil Survey of Suwannee County, Florida

Table 11.--Wildlife Habitat--Continued


Soil Survey of Suwannee County, Florida

Table 11.--Wildlife Habitat--Continued


Soil Survey of Suwannee County, Florida

Table 11.--Wildlife Habitat--Continued


## Soil Survey of Suwannee County, Florida

Table 12.--Dwellings and Small Commercial Buildings
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]


Table 12.--Dwellings and Small Commercial Buildings--Continued


Table 12.--Dwellings and Small Commercial Buildings--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 17: |  |  |  |  |  |  |  |
| Falmouth----------- | 36 | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\begin{array}{\|l} 0.50 \\ 0.39 \end{array}$ | ```\|Very limited Depth to saturated zone Shrink-swell``` | $1 \begin{aligned} & 1.00 \\ & 0.50\end{aligned}$ | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ |
| Bonneau------------- | 30 | Not limited |  | Somewhat limited Depth to saturated zone | 0.47 | Not limited |  |
| Blanton------------ | 22 | Not limited |  | $\begin{array}{\|l} \text { Somewhat limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ | 0.24 | Not limited |  |
| 18: |  |  |  |  |  |  |  |
| Otela-------------- | 42 | Not limited |  | $\left\lvert\, \begin{gathered}\text { Somewhat limited } \\ \text { Depth to } \\ \text { saturated zone }\end{gathered}\right.$ | 0.16 | Not limited |  |
| Chiefland---------- | 30 | Not limited |  | \| Not limited |  | Not limited |  |
| Ichetucknee-------- | 18 | ```\| Somewhat limited ``` | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ | ```\|Very limited``` | 1.00 0.50 | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ |
| 19 : |  |  |  |  |  |  |  |
| Chiefland---------- | 85 | $\begin{gathered} \text { Very limited } \\ \text { Flooding } \end{gathered}$ | 1.00 | $\begin{gathered} \text { Very limited } \\ \text { Flooding } \end{gathered}$ | 1.00 | Very limited Flooding | 11.00 |
| 20: |  |  |  |  |  |  |  |
| Chiefland---------- | 55 | $\begin{gathered} \text { Very limited } \\ \text { Flooding } \end{gathered}$ | 1.00 | $\begin{gathered} \text { Very limited } \\ \text { Flooding } \end{gathered}$ | 11.00 | $\begin{gathered} \text { Very limited } \\ \text { Flooding } \end{gathered}$ | 1.00 |
| Pedro Variant------ | 35 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | \| Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to hard bedrock | 1.00 | Depth to hard bedrock | \| 1.00 | Depth to hard bedrock | \| 1.00 |
|  |  | Depth to soft bedrock | 0.50 | Depth to soft bedrock | 1.00 | Depth to soft bedrock | 1.00 |
| 21: |  |  |  |  |  |  |  |
| Alaga-------------- | 80 | Not limited |  | Not limited |  | Not limited |  |
| 22 : |  |  |  |  |  |  |  |
| Blanton------------ | 39 | \| Not limited |  | Somewhat limited Depth to saturated zone | 0.24 | Not limited |  |
| Padlock------------ | 32 | ```\|Somewhat limited Shrink-swell Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ | Very limited Depth to saturated zone Shrink-swell | 1.00 0.50 | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ |
| Alpin-------------- | 18 | Not limited |  | Not limited |  | Not limited |  |
| 25: |  |  |  |  |  |  |  |
| Pantego------------ | 90 | ```\| Very limited ``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \end{aligned}\right.$ |  | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \end{aligned}\right.$ | ```Very limited Ponding Depth to saturated zone``` | $\text { \| } 1.00$ |

Table 12.--Dwellings and Small Commercial Buildings--Continued


Table 12.--Dwellings and Small Commercial Buildings--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 39 : |  |  |  |  |  |  |  |
| Mascotte- | 30 | ```Very limited Flooding Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \end{aligned}\right.$ | ```Very limited Flooding Depth to saturated zone``` | 1.00 1.00 | ```Very limited Flooding Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \end{aligned}\right.$ |
| Albany- | 21 | ```Very limited Flooding Depth to saturated zone``` | 1.00 <br> 0.39 | ```Very limited Flooding Depth to saturated zone``` | 1.00 1.00 | ```Very limited Flooding Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.39 \end{aligned}\right.$ |
| 41: |  |  |  |  |  |  |  |
| Fluvaquents----- | 40 | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | \| 1.00 | Depth to saturated zone | 1.00 |
| Meggett--------- | 30 | Very limited <br> Ponding <br> Flooding <br> Depth to saturated zone Shrink-swell |  | Very limited <br> Ponding <br> Flooding <br> Depth to saturated zone Shrink-swell |  | Very limited <br> Ponding <br> Flooding <br> Depth to saturated zone Shrink-swell |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  | $1 \begin{aligned} & 1.00 \\ & 1.00\end{aligned}$ |  | 1.00 0.50 |  | $1 \begin{aligned} & 1.00 \\ & 1.00\end{aligned}$ |
| Bigbee---------- | 20 | Very limited Flooding |  | ```\| Very limited Flooding Depth to saturated zone``` |  | Very limited Flooding | 1.00 |
|  |  |  | 1.00 |  | 1.00 |  |  |
|  |  |  |  |  | 0.31 |  |  |
| 43 : |  |  |  |  |  |  |  |
| Blanton- | 35 | Not limited |  | Somewhat limited Depth to saturated zone | 0.24 | Not limited |  |
| Foxworth-------- | 30 | Not limited |  | Somewhat limited Depth to saturated zone | 0.31 | Not limited |  |
| Alpin | 25 | Not limited |  | Not limited |  | Not limited |  |
|  |  |  |  |  |  |  |  |
| Chipley- | 55 | Not limited |  | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ | 0.99 | Not limited |  |
| Foxworth-------- | 25 | Not limited |  | Somewhat limited Depth to saturated zone | 0.31 | Not limited |  |
| Albany- | 15 | Somewhat limited Depth to saturated zone | 0.39 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ | 1.00 | Somewhat limited Depth to saturated zone | 0.39 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 40 | ```Very limited Ponding Depth to saturated zone Subsidence``` | 1.00 | ```\|Very limited Ponding Depth to saturated zone Subsidence``` | 1.00 | Ponding | 1.00 |
|  |  |  | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00\end{aligned}\right.$ |  | $1 \begin{aligned} & 1.00 \\ & 1.00\end{aligned}$ | Depth to saturated zone Subsidence | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00\end{aligned}\right.$ |

Table 12.--Dwellings and Small Commercial Buildings--Continued


Table 12.--Dwellings and Small Commercial Buildings--Continued


Table 12.--Dwellings and Small Commercial Buildings--Continued


Table 12.--Dwellings and Small Commercial Buildings--Continued

| Map symbol and soil name | Pct. <br> 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 |
| 77: |  |  |  |  |  |  |  |
| Wampee- | 65 | Somewhat limited Depth to saturated zone slope | $\left\lvert\, \begin{aligned} & 0.99 \\ & 0.91 \end{aligned}\right.$ | ```Very limited Depth to saturated zone slope``` | 1.00 0.91 | ```\|very limited ``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & \mid 0.99 \end{aligned}\right.$ |
| Blanton- | 30 | Somewhat limited Slope | 0.91 | ```Somewhat limited Slope Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 0.91 \\ & 0.24 \end{aligned}\right.$ | $\begin{aligned} & \text { Very limited } \\ & \text { Slope } \end{aligned}$ | 1.00 |
| $\begin{aligned} & 79 \text { : } \\ & \text { Blanton- } \end{aligned}$ | 87 | Not limited |  | Somewhat limited |  | Not limited |  |
|  |  |  |  | Depth to saturated zone | 0.24 |  |  |
| 80: |  |  |  |  |  |  |  |
| Bonneau- | 80 | Not limited |  | Somewhat limited Depth to saturated zone | 0.47 | Not limited |  |
| 81: |  |  |  |  |  |  |  |
| Blanton-- | 40 | Not limited |  | Not limited |  | Not limited |  |
| Bonneau- | 30 | Not limited |  | Somewhat limited Depth to saturated zone | 0.47 | Not limited |  |
| Ichetucknee- | 20 | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ | ```Very limited Depth to saturated zone Shrink-swell``` | 1.00 0.50 | Somewhat limited <br> Shrink-swell <br> Depth to saturated zone | $\left\lvert\, \begin{aligned} & 0.50 \\ & 0.39 \end{aligned}\right.$ |
| 83 : <br> Urban land- | 96 | Not rated |  | Not rated |  | Not rated |  |
| 86 : |  |  |  |  |  |  |  |
| Aquents - | 95 | ```Very limited Ponding Flooding Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 1.00 \end{aligned}\right.$ | ```Very limited Ponding Flooding Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 1.00 \end{aligned}\right.$ |  | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 1.00 \end{aligned}\right.$ |

## Soil Survey of Suwannee County, Florida

Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued

| Map symbol and soil name | Pct. <br> 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 |
| 29: |  |  |  |  |  |  |  |
| Alpin | 80 | Not limited |  | \|Very limited Cutbanks cave | 1.00 | Somewhat limited Droughty | 0.87 |
| Alpin----------- | 85 | Somewhat limited slope | 0.04 | \|Very limited Cutbanks cave slope |  | $30:$ |  |
|  |  |  |  |  | 1.00 | Somewhat limited Droughty Slope | 0.87 |
|  |  |  |  |  | 0.04 |  | 0.04 |
| 32: |  |  |  |  |  |  |  |
| Leon------------ | 80 | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ | 1.00 | ```\|Very limited Depth to saturated zone Cutbanks cave``` |  | Very limited |  |
|  |  |  |  |  | 1.00 | Depth to saturated zon | 1.00 |
|  |  |  |  |  | 1.00 | Droughty | 1.00 |
| 34: |  |  |  |  |  |  |  |
| Falmouth-------- | 40 | Very limited |  | Very limited |  | Somewhat limited |  |
|  |  | Low strength | 1.000.500.19 | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.19 |
|  |  | Shrink-swell |  |  |  |  |  |
|  |  | Depth to |  | Too clayey | 0.34 |  |  |
|  |  | saturated zone |  | Cutbanks cave | 0.10 |  |  |
| Bonneau-------- | 30 | Not limited |  | \|Very limited Cutbanks cave Depth to saturated zone |  | Somewhat limited Droughty |  |
|  |  |  |  |  | 1.00 |  | 0.29 |
|  |  |  |  |  | 0.47 |  |  |
| Blanton--------- | 20 | Not limited |  | Very limited Cutbanks cave Depth to saturated zone |  | Very limited Droughty |  |
|  |  |  |  |  | 1.00 |  | 0.99 |
|  |  |  |  |  | 0.24 |  |  |
| $35:$ |  |  |  |  |  |  |  |
| Mascotte------- | 51 | Very limited Depth to saturated zone | 1.00 | ```\|Very limited Depth to saturated zone Cutbanks cave``` | 1.00 | Very limited Depth to saturated zone |  |
|  |  |  |  |  |  |  | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
| Sapelo--------- | 30 | Very limited Depth to saturated zone | 1.00 | ```\|Very limited Depth to saturated zone Cutbanks cave``` |  | Very limited Depth to saturated zone |  |
|  |  |  |  |  | 1.00 |  | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
| 38: |  |  |  |  |  |  |  |
| Alpin---------- | 91 | Very limited Flooding | 1.00 | \|Very limited Cutbanks cave Flooding |  | Somewhat limited Droughty Flooding |  |
|  |  |  |  |  | 1.00 |  | 0.87 |
|  |  |  |  |  | 0.60 |  | 0.60 |
| $39:$ |  |  |  |  |  |  |  |
| Sapelo--------- | 45 | ```\|ery limited Depth to saturated zone Flooding``` |  | \|Very limited Depth to saturated zone Cutbanks cave Flooding |  | ```Very limited Flooding Depth to saturated zone``` |  |
|  |  |  | 1.00 |  | 1.00 |  | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ |
|  |  |  |  |  |  |  |  |
|  |  |  | 1.00 |  | 1.00 |  |  |
|  |  |  |  |  | 0.80 |  |  |
| Mascotte-------- | 30 | ```Very limited Depth to saturated zone Flooding``` |  | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ |  | Very limited | $\begin{aligned} & 1.00 \\ & 1.00 \end{aligned}$ |
|  |  |  | 1.00 |  | 1.00 | Flooding |  |
|  |  |  |  |  |  | Depth to |  |
|  |  |  | 1.00 | Cutbanks cave | 1.00 | saturated zone |  |
|  |  |  |  | Flooding | 0.80 |  |  |

Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 46 : |  |  |  |  |  |  |  |
| Pamlico--------- | 40 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Organic matter content | 1.00 |
|  |  | Subsidence | 1.00 | Cutbanks cave Organic matter content | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
| Olustee--------- | 32 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  | Cutbanks cave | 1.00 | Droughty | 0.28 |
| Pottsburg------- | 25 | Very limited Ponding |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone Cutbanks cave | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  |  | 1.00 | Droughty | 0.69 |
|  |  |  |  |  |  | Too sandy | 0.50 |
| 47: |  |  |  |  |  |  |  |
| Clara----------- | 55 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone Cutbanks cave | 1.00 | Flooding | 1.00 |
|  |  |  |  |  |  | Depth to | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 0.80 | saturated zon |  |
| Meadowbrook----- | 35 | ```Very limited Ponding Depth to saturated zone Flooding``` |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Ponding | 1.00 | Ponding |  |
|  |  |  | $1 \begin{aligned} & 1.00 \\ & 1.00\end{aligned}$ | Depth to saturated zone Cutbanks cave | 1.00 | Flooding | 1.00 1.00 |
|  |  |  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  |  | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.80 \end{aligned}\right.$ |  |  |
|  |  |  | 1.00 | Flooding |  | Droughty | 0.95 |
| 49: |  |  |  |  |  |  |  |
| Sapelo---------- | 60 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone Cutbanks cave | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
| Mascotte------- | 20 | Very limited Depth to saturated zone |  | ```\|Very limited Depth to saturated zone Cutbanks cave``` |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
| Plummer--------- | 16 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ |  | Very limited Depth to saturated zone Cutbanks cave |  | Very limited |  |
|  |  |  | 11.00 |  | 1.00 | ```Depth to saturated zone Droughty``` | 1.00 |
|  |  |  |  |  | 1.00 |  | 0.92 |
| 51: |  |  |  |  |  |  |  |
| Plummer-------- | 85 | Very limited Depth to saturated zone | \| 1.00 | Very limited |  | Very limited |  |
|  |  |  |  | Depth to saturated zone Cutbanks cave | 1.00 | Depth to saturated zone Droughty | 1.00 0.92 |

Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued


Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 69 : |  |  |  |  |  |  |  |
| Osier---------- | 45 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Flooding | 1.00 |
|  |  |  |  |  |  | Depth to | 1.00 |
|  |  | Flooding | 1.00 | Cutbanks cave | 1.00 | saturated zone |  |
|  |  |  |  | Flooding | 0.80 | Droughty | 1.00 |
|  |  |  |  |  |  | Too sandy | 0.50 |
| Bibb----------- | 27 | Very limited  <br> Ponding 1.00 |  | Very limited |  | Very limited |  |
|  |  |  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | saturated zone | 1.00 | Depth to saturated zone | 1.00 | Flooding | 1.00 |
|  |  |  |  |  |  |  | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 0.80 | saturated zone |  |
|  |  |  |  | Cutbanks cave | 0.10 |  |  |
| Albany---------- | 18 | Very limited |  | Very limited | 1.00 | Very limited |  |
|  |  | Flooding | 1.00 | Depth to |  | Droughty | 1.00 |
|  |  | Depth to | 0.19 | saturated zone |  | Flooding | 0.60 |
|  |  | saturated zone |  | Cutbanks cave | 1.00 | Depth to | 0.19 |
|  |  |  |  | Flooding | 0.60 | saturated zone |  |
| 71: |  |  |  |  |  |  |  |
| Otela----------- | 42 | Not limited |  | ```\|Very limited Cutbanks cave Depth to saturated zone``` |  | Somewhat limited Droughty |  |
|  |  |  |  |  | 1.00 |  | 0.34 |
|  |  |  |  |  | 0.16 |  |  |
| Alpin- | 35 | Not limited |  | $\begin{aligned} & \text { \|Very limited } \\ & \quad \text { Cutbanks cave } \end{aligned}$ |  | Somewhat limited Droughty |  |
|  |  |  |  |  | 1.00 |  | 0.87 |
| Chiefland------- | 20 | Not limited |  | \|Very limited Cutbanks cave | 1.00 | Very limited |  |
|  |  |  |  |  |  |  | 1.00 |
| 72: |  |  |  |  |  |  |  |
| Ousley--------- | 30 | Very limited Flooding | 1.00 | Very limited |  | Somewhat limited |  |
|  |  |  |  | Cutbanks cave | 1.00 | Droughty | 0.91 |
|  |  |  |  | Depth to saturated zon | 0.99 | Flooding | 0.60 |
|  |  |  |  | Flooding | 0.60 |  |  |
| Blanton-------- | 28 | Very limited Flooding | 1.00 |  |  | Very limited |  |
|  |  |  |  |  | 1.00 | Droughty | 0.99 |
|  |  |  |  |  | 0.60 | Flooding | 0.60 |
|  |  |  |  |  | 0.24 |  |  |
|  |  |  |  |  |  |  |  |
| Fluvaquents----- | 26 | Very limited  <br> Ponding 1.00 |  | Very limited |  | Very limited |  |
|  |  |  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone Flooding | 1.001.00 | ```Depth to saturated zone Flooding Cutbanks cave``` | 1.00 | Depth to saturated zone Flooding | 1.00 |
|  |  |  |  |  | 0.60 |  | 0.60 |
|  |  |  | 1.00 |  | 0.10 |  |  |
| 73 : |  |  |  |  |  |  |  |
| Boulogne------- | 35 | Very limited Depth to saturated zone | 1.00 | Very limited |  | Very limited |  |
|  |  |  |  | Depth to saturated zone Cutbanks cave | 1.00 1.00 | Depth to saturated zone | 1.00 |

Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 73: |  |  |  |  |  |  |  |
| Chipley--------- | 30 | Not limited |  | \|Very limited Cutbanks cave Depth to saturated zone | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.99 \end{aligned}\right.$ | Somewhat limited Droughty | 0.87 |
| Hurricane------- | 20 | Not limited |  | ```\|Very limited Cutbanks cave Depth to saturated zone``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.99 \end{aligned}\right.$ | Very limited Droughty | 0.99 |
| 74: |  |  |  |  |  |  |  |
| Surrency------- | 35 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Flooding | 1.00 |
|  |  | ```saturated zone Flooding``` | 1.00 | saturated zone Cutbanks cave | 1.00 | Depth to saturated zone | \| 1.00 |
|  |  |  |  | Flooding | 0.80 | Droughty | 0.34 |
| Plummer---------- | 30 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Flooding | 1.00 |
|  |  | ```saturated zone Flooding``` | 1.00 | saturated zone Cutbanks cave | 1.00 | Depth to saturated zon | 1.00 |
|  |  |  |  | Flooding | 0.80 | Droughty | 0.92 |
| Cantey---------- | 25 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Flooding | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Depth to | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 0.80 | saturated zone |  |
|  |  | Shrink-swell | 0.50 | Too clayey | 0.28 |  |  |
|  |  | Low strength | 0.10 | Cutbanks cave | 0.10 |  |  |
| 76: |  |  |  |  |  |  |  |
| Wampee--------- | 51 | ```Somewhat limited Depth to saturated zone slope``` |  | Very limited |  |  |  |
|  |  |  | 0.19 | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.19 |
|  |  |  | 0.01 | Cutbanks cave | 1.00 | Droughty | 0.10 |
|  |  |  |  | Slope | 0.01 | slope | 0.01 |
| Blanton--------- | 38 | Somewhat limited Slope |  | ```\|Very limited Cutbanks cave Depth to saturated zone Slope``` |  | Very limited Droughty Slope |  |
|  |  |  | 0.01 |  |  |  | $0.99$ |
|  |  |  |  |  | $0.24$ |  | 0.01 |
|  |  |  |  |  | 0.01 |  |  |
| 77 : |  |  |  |  |  |  |  |
| Wampee---------- | 65 | Somewhat limited \| |  | Very limited |  | Somewhat limited |  |
|  |  | slope | 0.91 | Depth to | 1.00 | slope | 0.91 |
|  |  | Depth to saturated zone | 0.78 | saturated zone Cutbanks cave | 1.00 | Depth to saturated zone | 0.78 |
|  |  |  |  | Slope | 0.91 | Droughty | 0.10 |
| Blanton--------- | 30 | Somewhat limited Slope |  | Very limited Cutbanks cave Slope Depth to saturated zone |  | Very limited Droughty Slope |  |
|  |  |  | 0.91 |  | 1.00 |  | $0.91$ |
|  |  |  |  |  | 0.24 |  |  |

Table 13.--Roads and Streets, Shallow Excavations, and Lawns and Landscaping--Continued

[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 agree with the Standard Subsurface Drainfield System. 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 <br> and soil name | Pct. of map unit | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value |
|  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Ocilla---------- | 40 | Severely limited Depth to saturated zone Restricted permeability | 1.00 | Seepage | 1.00 |
|  |  |  | 0.50 | Depth to saturated zone | 1.00 |
|  |  |  |  | Slope | 0.08 |
| Albany---------- | 30 | Severely limited Depth to saturated zone | 1.00 | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  | slope | 0.08 |
| Blanton--------- | 18 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| 4: |  |  |  |  |  |
| Blanton--------- | 85 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.92 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| 5 : |  |  |  |  |  |
| Blanton--------- | 59 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Bonneau--------- | 36 | Moderately limited Restricted permeability | 0.50 | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.40 |
|  |  |  |  | slope | 0.08 |
| 7: |  |  |  |  |  |
| Bigbee--------- | 40 | Severely limitedFlooding |  | \| Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.10 |
| Garcon---------- | 30 | Severely limitedFlooding |  | \|Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| Meggett--------- | 20 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | \|Value |
| 10: |  |  |  |  |  |
| Blanton--------- | 45 | \|Severely limited Flooding | 1.00 | $\begin{array}{\|l} \text { Very limited } \\ \text { Flooding } \\ \text { Seepage } \\ \text { Slope } \end{array}$ | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 0.08 \end{aligned}\right.$ |
| Alpin----------- | 38 | Severely limited Flooding | 1.00 | \| Very limited |  |
|  |  |  |  | Flooding | 1.00 |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| 11: |  |  |  |  |  |
| Bonneau--------- | 40 | Moderately limited Restricted permeability | 0.50 | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.40 |
|  |  |  |  | Slope | 0.08 |
| Blanton--------- | 30 | Slightly limited |  | \|Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Padlock---------- | 20 | Severely limited Depth to saturated zone Restricted permeability |  | \|Very limited |  |
|  |  |  | 1.00 | \| Depth to saturated zone | 1.00 |
|  |  |  | 0.50 | Slope | 0.08 |
| 12: |  |  |  |  |  |
| Blanton--------- | 38 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 11.00 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Chiefland------- | 28 | Severely limited Depth to bedrock |  | \| Very limited |  |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  |  | slope | 1.00 |
|  |  |  |  | Depth to soft bedrock | 0.96 |
| Ichetucknee----- | 22 | Severely limited <br> Restricted permeability <br> Depth to saturated zone <br> Depth to bedrock |  | \| Very limited |  |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  | 1.00 | Slope | 1.00 |
|  |  |  | 0.54 | Depth to saturated zone | 0.75 |
| 13 : |  |  |  |  |  |
| Blanton--------- | 42 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Alpin----------- | 33 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | \| Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
| Bonneau-------- | 16 | Moderately limited Restricted permeability |  | \| Very limited |  |
|  |  |  | 0.50 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.40 |
|  |  |  |  | slope | 0.08 |
|  |  |  |  |  |  |

Soil Survey of Suwannee County, Florida

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | $\begin{array}{\|} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}$ | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \| Value | Rating class and limiting features | Value |
| 14: |  |  |  |  |  |
| Blanton------------ \| | 51 | Slightly limited |  | Very limited <br> Seepage <br> Slope <br> Depth to saturated zone | $\begin{aligned} & 1.00 \\ & 1.00 \\ & 0.02 \end{aligned}$ |
| Bonneau------------ | 37 | Moderately limited Restricted permeability | 0.50 | Very limited Seepage slope | $\text { \| } 1.00$ |
|  |  |  |  | Depth to saturated zone | 0.40 |
| $15:$ |  |  |  |  |  |
| Blanton------------ | 35 | Slightly limited |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Lynchburg---------- | 30 | Severely limited Depth to saturated zone Restricted permeability |  | Very limited |  |
|  |  |  | 11.00 | Seepage | 1.00 |
|  |  |  | 0.50 | Depth to saturated zone | 1.00 |
|  |  |  |  | slope | 0.08 |
| Bonneau----------- | 28 | Moderately limited Restricted permeability |  | Very limited |  |
|  |  |  | 0.50 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.40 |
|  |  |  |  | slope | 0.08 |
| 17: |  |  |  |  |  |
| Falmouth----------- | 36 | Severely limited |  | Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
|  |  | Restricted permeability | 0.50 | slope | 0.08 |
| Bonneau----------- | 30 | Moderately limited Restricted permeability |  | Very limited |  |
|  |  |  | 0.50 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.40 |
|  |  |  |  | Slope | 0.08 |
| Blanton------------ | 22 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| 18 : |  |  |  |  |  |
| Otela-------------- | 42 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| Chiefland---------- | 30 | Severely limited Depth to bedrock |  | Very limited |  |
|  |  |  | 1.00 | \| Seepage | 1.00 |
|  |  |  |  | Depth to soft bedrock | 0.96 |
|  |  |  |  | Slope | 0.08 |
| Ichetucknee-------- | 18 | Severely limited |  | Very limited |  |
|  |  | Restricted permeability | 1.00 | Seepage | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 0.75 |
|  |  | Depth to bedrock | 0.54 | Slope | 0.08 |

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 19 : |  |  |  |  |  |
| Chiefland------- | 85 | Severely limited |  | \| Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to bedrock | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to soft bedrock | 0.96 |
| 20: |  |  |  |  |  |
| Chiefland------- | 55 | Severely limitedFlooding |  | \| Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  | Depth to bedrock | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to soft bedrock | 0.96 |
| Pedro Variant---- | 35 | Severely limited |  | \| Very limited |  |
|  |  | Flooding | 1.00 | Depth to hard bedrock | 1.00 |
|  |  | Depth to bedrock | 1.00 | Depth to soft bedrock | 1.00 |
|  |  | Restricted permeability | 0.50 | Flooding | 1.00 |
| 21: |  |  |  |  |  |
| Alaga----------- | 80 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| 22 : |  |  |  |  |  |
| Blanton-------- | 39 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Padlock-------- | 32 | Severely limited Depth to saturated zone Restricted permeability |  | \| Very limited |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 |
|  |  |  | 0.50 | Slope | 0.08 |
| Alpin----------- | 18 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| 25: |  |  |  |  |  |
| Pantego--------- | 90 | Severely limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Restricted permeability | 0.50 | Depth to saturated zone | 1.00 |
| 26: |  |  |  |  |  |
| Hurricane------ | 39 | Severely limited |  | Very limited |  |
|  |  | Depth to saturated zonePresence of spodicmaterial | 1.00 | Seepage | 1.00 |
|  |  |  | 0.50 | Depth to saturated zone | 1.00 |
|  |  |  |  | Slope | 0.08 |
| Albany--------- | 32 | Severely limited Depth to saturated zone |  | \| Very limited |  |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  | Slope | 0.08 |
| Chipley-------- | 23 | Severely limited Depth to saturated zone | 1.00 | ```\|Very limited Seepage Depth to saturated zone Slope``` |  |
|  |  |  |  |  | 1.00 |
|  |  |  |  |  | 0.08 |

Table 14.--Sewage Disposal--Continued


Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | Pct. <br> of <br> map unit | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 39: |  |  |  |  |  |
| Albany--------- | 21 | Severely limited |  | \|Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 41: |  |  |  |  |  |
| Fluvaquents----- | 40 | Not rated |  | \| Very limited |  |
|  |  |  |  | Ponding | 1.00 |
|  |  |  |  | Flooding | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| Meggett--------- | 30 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| Bigbee---------- | 20 | Severely limitedFlooding |  | \|Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.10 |
| 43: |  |  |  |  |  |
| Blanton--------- | 35 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
|  |  |  |  | Depth to saturated zone | 0.02 |
| Foxworth-------- | 30 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 0.10 |
|  |  |  |  | Slope | 0.08 |
| Alpin----------- | 25 | Slightly limited |  | \|Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| 45 : |  |  |  |  |  |
| Chipley--------- | 55 | Severely limited Depth to saturated zone |  | \|Very limited |  |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  | slope | 0.08 |
| Foxworth-------- | 25 | Slightly limited |  | \| Very limited |  |
|  |  |  |  | Depth to saturated zone | 0.10 |
|  |  |  |  | slope | 0.08 |
| Albany---------- | 15 | Severely limited Depth to saturated zone |  | \| Very limited |  |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  | Slope | 0.08 |
| 46: |  |  |  |  |  |
| Pamlico--------- | 40 | \| Severely limited |  | \|Very limited |  |
|  |  |  | 1.00 | \| Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | Value | Rating class and limiting features | Value |
| 46: |  |  |  |  |  |
| Olustee--------- | 32 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Restricted permeability | 0.50 | Depth to saturated zone | 1.00 |
| Pottsburg------- | 25 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Presence of spodic material | 0.50 | Depth to saturated zone | 1.00 |
| 47: |  |  |  |  |  |
| Clara----------- | 55 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| Meadowbrook----- | 35 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| 49: |  |  |  |  |  |
| Sapelo---------- | 60 | Severely limited |  | \|Very limited |  |
|  |  | Depth to saturated zone | 1.00 | \| Seepage | 1.00 |
|  |  | Presence of spodic material | 0.50 | Depth to saturated zone | 1.00 |
| Mascotte------- | 20 | Severely limited |  | \|Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Restricted permeability | 0.50 | Depth to saturated zone | 1.00 |
|  |  | Presence of spodic material | 0.50 |  |  |
| Plummer-------- | 16 | Severely limited Depth to saturated zone |  | \|Very limited |  |
|  |  |  | 1.00 | \| Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 51: |  |  |  |  |  |
| Plummer--------- | 85 | Severely limited |  | \|Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 52 : |  |  |  |  |  |
| Plummer--------- | 90 | Severely limited |  | \| Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 54 : |  |  |  |  |  |
| Plummer-------- | 90 | Severely limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 59 : |  |  |  |  |  |
| Troup---------- | 90 | Slightly limited |  | \|Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | \| slope | 0.08 |

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | $\left\|\begin{array}{c} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}\right\|$ | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \| Value | Rating class and limiting features | \|Value |
| 60 : |  |  |  |  |  |
| Troup-------------- | 85 | Slightly limited |  | \|Very limited Seepage Slope | $\text { \| } 1.00$ |
| 61: |  |  |  |  |  |
| Udorthents---------- | 80 | Not rated |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
|  |  |  |  | Slope | 0.68 |
| Pits--------------- | 20 | Not rated |  | Not rated |  |
| 65: |  |  |  |  |  |
| Garcon------------- | 55 | Severely limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | \| 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| Eunola-------------- | 40 | Severely limited |  | Very limited |  |
|  |  |  |  | Flooding | 1.00 |
|  |  | Depth to saturated zone | 11.00 | Seepage | 1.00 |
|  |  | Restricted permeability | 0.50 | Depth to saturated zone | 1.00 |
| 68 : |  |  |  |  |  |
| Mascotte----------- | 55 | Severely limited |  | Very limited |  |
|  |  | \| Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Restricted permeability | 0.50 | Depth to saturated zone | 1.00 |
| Plummer------------ | 35 | ```Severely limited Flooding Depth to saturated zone``` |  | Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  |  | 11.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 69 : |  |  |  |  |  |
| Osier------------- | 45 | Severely limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | \| 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| Bibb--------------- | 27 | Severely limited |  | Very limited |  |
|  |  | Ponding | 1.00 | Ponding | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 11.00 | Depth to saturated zone | 1.00 |
| Albany------------- | 18 | ```Severely limited Flooding Depth to saturated zone``` |  | Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 71: |  |  |  |  |  |
| Otela-------------- | 42 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | slope | 0.08 |
| Alpin-------------- | 35 | Slightly limited |  | Very limited |  |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |

Table 14.--Sewage Disposal--Continued

| Map symbol and soil name | $\left\|\begin{array}{c} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}\right\|$ | Septic tank absorption fields |  | Sewage Lagoon |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class and limiting features | \| Value | Rating class and limiting features | \|Value |
| 71: |  |  |  |  |  |
| Chiefland---------- | 20 | Severely limited Depth to bedrock | 1.00 | ```\|Very limited ``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 0.96 \end{aligned}\right.$ |
| 72 : |  |  |  |  |  |
| Ousley------------- | 30 | Severely limitedFlooding |  | Very limited |  |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | \| 1.00 | Seepage | \| 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| Blanton------------ | 28 | Severely limitedFlooding | 1.00 | Very limited |  |
|  |  |  |  | Flooding | 11.00 |
|  |  |  |  | Seepage | 1.00 |
|  |  |  |  | Slope | 0.08 |
| Fluvaquents--------- | 26 | Not rated |  | Very limited |  |
|  |  |  |  | Ponding | 1.00 |
|  |  |  |  | Flooding | 1.00 |
|  |  |  |  | Depth to saturated zone | 1.00 |
| 73 : |  |  |  |  |  |
| Boulogne----------- | 35 | ```Severely limited Depth to saturated zone Presence of spodic material``` |  | Very limited |  |
|  |  |  | 11.00 | Seepage | 11.00 |
|  |  |  | 0.50 | Depth to saturated zone | \| 1.00 |
| Chipley------------ | 30 | Severely limited Depth to saturated zone | 1.00 | Very limited |  |
|  |  |  |  | Seepage | 11.00 |
|  |  |  |  | Depth to saturated zone | \| 1.00 |
|  |  |  |  | slope | 0.08 |
| Hurricane--------- | 20 | Severely limited <br> Depth to saturated zone <br> Presence of spodic material |  | ```Very limited Seepage Depth to saturated zone slope``` |  |
|  |  |  | $\left\lvert\, \begin{aligned} & 1.00 \\ & \mid 0.50 \end{aligned}\right.$ |  | 11.00 |
|  |  |  |  |  | 1.00 |
|  |  |  |  |  | 0.08 |
| 74 : |  |  |  |  |  |
| Surrency----------- | 35 | Severely limited |  | Very limited |  |
|  |  | Ponding | \| 1.00 | Ponding | 11.00 |
|  |  | Flooding | 1.00 | Flooding | 11.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| Plummer------------ | 30 | Severely limited |  | Very limited |  |
|  |  | Ponding | 11.00 | Ponding | 11.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Seepage | 1.00 |
| Cantey------------- | 25 | ```Severely limited Ponding Flooding Depth to saturated zone``` |  | Very limited |  |
|  |  |  | 1.00 | Ponding | 1.00 |
|  |  |  | 1.00 | Flooding | 1.00 |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 |
| 76 : |  |  |  |  |  |
| Wampee------------- | 51 | Severely limited |  | Very limited |  |
|  |  | Depth to saturated zone | 11.00 | Depth to saturated zone | 1.00 |
|  |  | Restricted permeability | 0.50 | Seepage | 1.00 |
|  |  | Slope | 0.01 | Slope | 1.00 |

Table 14.--Sewage Disposal--Continued


## Soil Survey of Suwannee County, Florida

## Table 15.--Landfills

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00 . The larger the value, the greater the limitation. See text for further explanation of ratings in this table]


Table 15.--Landfills--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 |
| 10: |  |  |  |  |  |  |  |
| Blanton--------- | 45 | Very limited |  | Very limited |  | Very limited | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Too sandy |  |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |  |  |
|  |  | Too sandy | 1.00 | Seepage | 1.00 |  |  |
| Alpin---------- | 38 | Very limited |  | \| Very limited |  | Very limited | 1.00 |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Too sandy |  |
|  |  | Seepage | 1.00 | Seepage | 1.00 | Seepage | 1.00 |
|  |  | Too sandy | 1.00 |  |  |  |  |
| 11: |  |  |  |  |  |  |  |
| Bonneau--------- | 40 | Very limited Depth to saturated zone |  | ```Very limited Depth to saturated zone Seepage``` | 1.00 | Not limited |  |
|  |  |  | 1.00 |  |  |  |  |
|  |  |  |  |  | 1.00 |  |  |
| Blanton--------- | 30 | ```Very limited Depth to saturated zone Too sandy``` |  | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ |  |  | 11.00 |
|  |  |  | 1.00 |  | 1.00 | Too sandy |  |
|  |  |  | 1.00 | Seepage | 1.00 |  |  |
| Padlock--------- | 20 | ```Very limited Depth to saturated zone Too clayey``` |  | Very limited Depth to saturated zone |  | ```Somewhat limited Depth to saturated zone Too clayey``` |  |
|  |  |  | 1.00 |  | 1.00 |  | 0.86 |
|  |  |  | 0.50 |  |  |  | 0.50 |
| 12: |  |  |  |  |  |  |  |
| Blanton--------- | 38 | ```Very limited Depth to saturated zone Too sandy``` |  | \|Very limited |  | Very limited |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 |  |  |
| Chiefland------- | 28 | Very limited Depth to bedrock Too sandy |  | Very limited Seepage Depth to bedrock |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 |  | 0.96 | Seepage | 1.00 |
|  |  |  |  |  |  | Depth to bedrock | 0.96 |
| Ichetucknee----- | 22 | Very limited |  | Somewhat limited |  | Very limited |  |
|  |  | \| Depth to bedrock | 1.00 | Depth to saturated zone | 0.75 | Too clayey | 1.00 |
|  |  | Too clayey | 1.00 |  |  | Depth to | 0.86 |
|  |  | Depth to saturated zone | 0.99 |  |  | saturated zone |  |
| 13 : |  |  |  |  |  |  |  |
| Blanton-------- | 42 | ```Very limited Depth to saturated zone Too sandy``` |  | ```Very limited Depth to saturated zone Seepage``` |  | Very limited Too sandy |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  | 1.00 |  | 1.00 |  |  |
| Alpin----------- | 33 | Very limited Seepage Too sandy | 1.00 | Very limited Seepage | 1.00 | Very limited Too sandy Seepage | 1.00 |
|  |  |  | 1.00 |  |  |  | 1.00 |
| Bonneau--------- | 16 | Very limited Depth to saturated zone |  | Very limited |  | Not limited |  |
|  |  |  | 1.00 | Depth to saturated zone Seepage | 1.00 1.00 |  |  |

Table 15.--Landfills--Continued


Table 15.--Landfills--Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{gathered}\right.$ | 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 |
| 19 : |  |  |  |  |  |  |  |
| Chiefland---------- | 85 | Very limited |  | Very limited |  | \| Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Too sandy | 1.00 |
|  |  | Depth to bedrock | 1.00 | Seepage | 1.00 | Seepage | 1.00 |
|  |  | Too sandy | 1.00 | Depth to bedrock | 0.96 | Depth to bedrock | 0.96 |
| 20: |  |  |  |  |  |  |  |
| Chiefland---------- | 55 | ry limited  <br> Flooding 1.00 |  | Very limited  <br> Flooding 1.00 |  | Very limited |  |
|  |  |  |  | Too sandy | 1.00 |
|  |  | Depth to bedrock | 1.00 |  |  | Seepage | 1.00 | Seepage | 1.00 |
|  |  | Too sandy | 1.00 | Depth to bedrock | 0.96 | Depth to bedrock | 0.96 |
| Pedro Variant------ | 35 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Depth to bedrock | 1.00 |
|  |  | Depth to bedrock | 1.00 | Depth to bedrock | 1.00 | Seepage | 0.52 |
|  |  | Seepage | 1.00 |  |  |  |  |
| 21: |  |  |  |  |  |  |  |
| Alaga-------------- | 80 | Very limited Seepage Too sandy |  | Very limited Seepage |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Seepage | 1.00 |
|  |  |  | 0.50 |  |  | Too sandy | 0.50 |
| 22: |  |  |  |  |  |  |  |
| Blanton------------- \| | 39 | ```Very limited Depth to saturated zone Too sandy``` |  | Very limited |  |  |  |
|  |  |  | 1.00 | Depth to saturated zon | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 |  |  |
| Padlock------------ | 32 | ```Very limited Depth to saturated zone Too clayey``` |  | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ |  | Somewhat limited |  |
|  |  |  | 1.00 |  | 1.00 | Depth to saturated zone | 0.86 |
|  |  |  | 0.50 |  |  | Too clayey | 0.50 |
| Alpin-------------- | 18 | \| Very limited |  | $\left\lvert\, \begin{gathered}\text { Very limited } \\ \text { Seepage }\end{gathered}\right.$ |  | Very limited |  |
|  |  | \| Seepage | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  | Too sandy | 1.00 |  |  | Seepage | 1.00 |
| 25: |  |  |  |  |  |  |  |
| Pantego------------ | 90 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to saturated zone Ponding | 1.00 | Ponding | 1.00 | Ponding \|1.00 |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 |
| 26: |  |  |  |  |  |  |  |
| Hurricane---------- | 39 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Seepage | 1.00 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | Depth to | 0.24 |
|  |  | Seepage | 1.00 |  |  | saturated zone |  |
| Albany------------ | 32 | Very limited |  | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ |  | Very limited |  |
|  |  | Depth to | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  | \| saturated zone |  |  |  | Seepage | 1.00 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | Depth to saturated zone | 0.86 |
| Chipley------------ | 23 | ```\| Very limited Depth to saturated zone Seepage``` |  | Very limitedDepth to |  | Very limited |  |
|  |  |  | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  |  |  | saturated zone |  | Seepage | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 | Depth to | 0.47 |
|  |  | Too sandy | 1.00 |  |  | saturated zone |  |

Table 15.--Landfills--Continued


Table 15.--Landfills--Continued

| Map symbol and soil name | $\left\|\begin{array}{c} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}\right\|$ | 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 |
| 39 : |  |  |  |  |  |  |  |
| Albany--------- | 21 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Too sandy | 1.00 |
|  |  | Depth to | 1.00 | Depth to | 1.00 | Seepage | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Depth to | 0.86 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | saturated zone |  |
| 41: |  |  |  |  |  |  |  |
| Fluvaquents----- | 40 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Ponding | $1.00$ | Depth to | 1.00 |
|  |  | saturated zone Ponding | 1.00 | Depth to saturated zone | $\text { \| } 1.00$ | saturated zone |  |
| Meggett--------- | 30 | Very limited |  | Very limited |  | Very limited |  |
|  |  |  |  | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Ponding | 1.00 | Depth to | 1.00 |
|  |  | saturated zone Ponding | 1.00 | Depth to saturated zone | 1.00 | saturated zone Too clayey | 0.50 |
| Bigbee---------- | 20 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Too sandy | 1.00 |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Seepage | 1.00 |
|  |  | Seepage | 1.00 | Seepage | 1.00 |  |  |
|  |  | Too sandy | 1.00 |  |  |  |  |
| 43: |  |  |  |  |  |  |  |
| Blanton--------- | 35 | ```\| Very limited Depth to saturated zone Too sandy``` |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 |  |  |
| Foxworth-------- | 30 | ```\|Very limited ``` |  | Very limited |  | Very limited |  |
|  |  |  | 1.00 | Depth to saturated zone | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 | Seepage | 1.00 |
|  |  | Too sandy | 1.00 |  |  |  |  |
| Alpin----------- | 25 | Very limited |  | Very limited Seepage |  | Very limited |  |
|  |  | Seepage | 1.00 |  | 1.00 | Too sandy | 1.00 |
|  |  |  | 1.00 |  |  | Seepage | 1.00 |
| 45: |  |  |  |  |  |  |  |
| Chipley--------- | 55 | ```\|Very limited Depth to saturated zone Seepage Too sandy``` |  | Very limited |  | Very limited |  |
|  |  |  | 11.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  |  |  | saturated zone |  | Seepage | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 | Depth to | 0.47 |
|  |  |  | 11.00 |  |  | saturated zone |  |
| Foxworth-------- | 25 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ |  | Very limited |  | Very limited |  |
|  |  |  | \| 1.00 | Depth to saturated zone | 1.00 | Too sandy Seepage | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \end{aligned}\right.$ |
|  |  | Seepage | 11.00 | Seepage | 1.00 |  |  |
|  |  | Too sandy | 1.00 |  |  |  |  |
| Albany---------- | 15 | ```Very limited Depth to saturated zone Too sandy``` |  | \| Very limited |  | Very limited |  |
|  |  |  | 11.00 | Depth to | 1.00 | Too sandy | 1.00 |
|  |  |  |  | \| saturated zone |  | Seepage | 1.00 |
|  |  |  | 1.00 | Seepage | 1.00 | Depth to saturated zone | 0.86 |

Table 15.--Landfills--Continued


Table 15.--Landfills--Continued


Table 15.--Landfills--Continued


Table 15.--Landfills--Continued

| Map symbol and soil name | Pct. <br> of map unit | Trench sanitary <br> 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 |
| 73: |  |  |  |  |  |  |  |
| Chipley--------- | 30 | \| Very limited |  | Very limited |  | Very limited |  |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Too sandy | 1.00 |
|  |  |  |  |  |  | Seepage | 1.00 |
|  |  | Seepage | 1.00 | Seepage | 1.00 | Depth to | 0.47 |
|  |  | Too sandy | 1.00 |  |  | saturated zone |  |
| Hurricane------- | 20 | Very limited |  | Very limited | 1.00 | Very limited |  |
|  |  | Depth to | 1.00 | Depth to |  | Too sandy | 1.00 |
|  |  | saturated zone |  | saturated zone |  | Seepage | 1.00 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | Depth to | 0.24 |
|  |  | Seepage | 1.00 |  |  | saturated zone |  |
| 74: |  |  |  |  |  |  |  |
| Surrency-------- | 35 | Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone Ponding | 1.00 | Ponding | 1.00 | Depth to | 1.00 |
|  |  |  |  | Depth to | 1.00 | saturated zone Seepage |  |
|  |  |  | 1.00 | saturated zone |  |  | 0.21 |
|  |  | Seepage | 1.00 | Seepage | 1.00 |  |  |
| Plummer--------- | 30 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to saturated zone Ponding | 1.00 | Ponding | 1.00 | Depth tosaturated zone | 1.00 |
|  |  |  |  | Depth to saturated zone | \| 1.00 |  |  |
|  |  |  | 1.00 |  |  | saturated zone Too sandy | 1.00 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | Seepage | 1.00 |
| Cantey---------- | 25 | \| Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Ponding | 1.00 | Depth to saturated zone | 1.00 |
|  |  | saturated zone |  | Depth to saturated zone | 1.00 |  |  |
|  |  | Ponding | 1.00 |  |  |  |  |
|  |  | Too clayey | 0.50 |  |  |  |  |
| 76 : |  |  |  |  |  |  |  |
| Wampee | 51 | Very limited |  | \|Very limited |  | Somewhat limited |  |
|  |  | Depth to saturated zone | 1.00 | Depth to saturated zone | 1.00 | Depth to saturated zone Slope | 0.86 |
|  |  | slope | 0.01 | Seepage | 1.00 |  | 0.01 |
|  |  |  |  | slope | 0.01 |  |  |
| Blanton--------- | 38 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ |  | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ | 1.00 | Very limited Too sandy |  |
|  |  |  | 1.00 |  |  |  | 1.00 |
|  |  | Too sandy | 1.00 | Seepage | 1.00 | Slope | 0.01 |
|  |  | Slope | 0.01 | Slope | 0.01 |  |  |
| 77: |  |  |  |  |  |  |  |
| Wampee---------- | 65 | ```Very limited Depth to saturated zone Slope``` |  | Very limited  <br> Depth to 1.00 |  | Very limited |  |
|  |  |  | 1.00 |  |  | Depth to saturated zone | 1.00 |
|  |  |  | 0.91 | Seepage | 1.00 | slope | 0.91 |
|  |  |  |  | Slope | 0.91 |  |  |
| Blanton--------- | 30 | Very limited |  | $\left\lvert\, \begin{gathered}\text { Very limited } \\ \text { Depth to }\end{gathered}\right.$ |  | Very limited |  |
|  |  | ```Depth to saturated zone Too sandy Slope``` | 1.00 |  | 1.00 | Too sandy Slope | 1.00 |
|  |  |  |  | saturated zone |  |  | 0.91 |
|  |  |  | 1.00 | Seepage | 1.00 |  |  |
|  |  |  | 0.91 | slope | 0.91 |  |  |

Table 15.--Landfills--Continued

| Map symbol and soil name | Pct. <br> of map unit | Trench sanitary <br> 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 |
| 79: |  |  |  |  |  |  |  |
| Blanton- | 87 | ```Very limited Depth to saturated zone Too sandy``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00\end{aligned}\right.$ | ```Very limited Depth to saturated zone Seepage``` | 1.00 1.00 | \|Very limited Too sandy | 1.00 |
| 80 : |  |  |  |  |  |  |  |
| Bonneau- | 80 | $\begin{array}{\|l} \text { Very limited } \\ \text { Depth to } \\ \text { saturated zone } \end{array}$ | 1.00 | ```Very limited Depth to saturated zone Seepage``` | 1.00 1.00 | Not limited |  |
| 81: |  |  |  |  |  |  |  |
| Blanton- | 40 | Very limited Too sandy | 1.00 | Very limited Seepage | 1.00 | Very limited Too sandy | 1.00 |
| Bonneau- | 30 | $\begin{aligned} & \text { Very limited } \\ & \text { Depth to } \\ & \text { saturated zone } \end{aligned}$ | 1.00 | ```Very limited Depth to saturated zone Seepage``` | 1.00 1.00 | Not limited |  |
| Ichetucknee-- | 20 | Very limited Depth to bedrock Too clayey Depth to saturated zone | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 0.99 \end{aligned}\right.$ | Somewhat limited Depth to saturated zone | 0.75 | \|Very limited Too clayey Depth to saturated zone | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.86 \end{aligned}\right.$ |
| $83 \text { : }$ |  |  |  |  |  |  |  |
| 86 : |  |  |  |  |  |  |  |
| Aquents--------- | 95 | Very limited |  | Very limited |  | Very limited |  |
|  |  | Flooding | 1.00 | Flooding | 1.00 | Ponding | 1.00 |
|  |  | Depth to | 1.00 | Ponding | 1.00 | Depth to | 1.00 |
|  |  | saturated zone Ponding | $1.00$ | Depth to saturated zone | 1.00 | saturated zone Too sandy | 1.00 |
|  |  | Seepage | 1.00 | Seepage | 1.00 | Seepage |  |
|  |  | Too sandy | 1.00 |  |  |  |  |

Table 16.--Source of Gravel and Sand
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table]

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct } \\ \text { of } \\ \text { map } \\ \mid \text { unit } \end{gathered}\right.$ | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| 2 : |  |  |  |  |  |
| Ocilla---------- | 40 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.13 |
| Albany---------- | 30 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.01 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.12 |
| Blanton--------- | 18 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| 4: |  |  |  |  |  |
| Blanton--------- | 85 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| 5 : |  |  |  |  |  |
| Blanton-------- | 59 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Bonneau-------- | 36 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| 7: |  |  |  |  |  |
| Bigbee---------- | 40 | Poor |  | Fair |  |
|  |  | Bottom layer |  | Thickest layer |  |
|  |  | Thickest layer | 0.00 | Bottom layer | $0.44$ |
| Garcon---------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.07 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.26 |
| Meggett--------- | 20 | \| Poor |  | Poor |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 10: |  |  |  |  |  |
| Blanton--------- | 45 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Alpin---------- | 38 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.23 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.40 |

Table 16.--Source of Gravel and Sand-Continued

| Map symbol and soil name | Pct. of map unit | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | \| Value | Rating class | Value |
| 11: |  |  |  |  |  |
| Bonneau------------ | 40 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| Blanton------------ | 30 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Padlock------------ | 20 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.30 |
| 12: |  |  |  |  |  |
| Blanton------------ | 38 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Chiefland---------- | 28 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.04 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.23 |
| Ichetucknee-------- | 22 | \| Poor |  | \| Poor |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 13: |  |  |  |  |  |
| Blanton------------ | 42 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Alpin------------- | 33 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.23 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.40 |
| Bonneau------------ | 16 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| 14: |  |  |  |  |  |
| Blanton----------- | 51 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Bonneau------------ | 37 | \| Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| 15: |  |  |  |  |  |
| Blanton------------ | 35 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Lynchburg---------- | 30 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.01 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.12 |
| Bonneau----------- | 28 | \| Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | - Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |

Table 16.--Source of Gravel and Sand--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| 17: |  |  |  |  |  |
| Falmouth-------- | 36 | Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.01 |
| Bonneau--------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| Blanton--------- | 22 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| 18: |  |  |  |  |  |
| Otela----------- | 42 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.71 |
| Chiefland------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.04 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.23 |
| Ichetucknee----- | 18 | Poor |  | Poor |  |
|  |  | Bottom layer | $0.00$ | Bottom layer | $0.00$ |
|  |  | Thickest layer | $0.00$ | Thickest layer | $0.00$ |
| 19 : |  |  |  |  |  |
| Chiefland------- | 85 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.04 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.23 |
| 20 : |  |  |  |  |  |
| Chiefland------- | 55 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.04 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.23 |
| Pedro Variant--- | 35 | Poor |  | Poor |  |
|  |  | Bottom layer | $0.00$ | Bottom layer | $0.00$ |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.00 |
| 21: |  |  |  |  |  |
| Alaga---------- | 80 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.10 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.11 |
| 22 : |  |  |  |  |  |
| Blanton-------- | 39 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Padlock--------- | 32 | Poor <br> Bottom layer <br> Thickest layer |  | Fair |  |
|  |  |  |  | Bottom layer |  |
|  |  |  | 0.00 | Thickest layer | 0.30 |
| Alpin---------- | 18 | Poor |  | Fair |  |
|  |  | Bottom layer |  | Thickest layer | $0.23$ |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.40 |
| 25: |  |  |  |  |  |
| Pantego-------- | 90 | PoorBottom layerThickest layer |  | Poor |  |
|  |  |  | 0.00 | Bottom layer | 0.00 |
|  |  |  | 0.00 | Thickest layer | 0.00 |
|  |  |  |  |  |  |

Table 16.--Source of Gravel and Sand-Continued


Table 16.--Source of Gravel and Sand--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> unit | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| $39:$ |  |  |  |  |  |
| Mascotte-------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.03 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.06 |
| Albany--------- | 21 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.01 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.12 |
| 41: |  |  |  |  |  |
| Fluvaquents----- | 40 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.05 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.16 |
| Meggett--------- | 30 | Poor |  | Poor |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Bigbee---------- | 20 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.14 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.44 |
| 43: |  |  |  |  |  |
| Blanton--------- | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Foxworth-------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.30 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.36 |
| Alpin----------- | 25 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.23 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.40 |
| 45: |  |  |  |  |  |
| Chipley--------- | 55 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.17 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.17 |
| Foxworth-------- | 25 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.30 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.36 |
| Albany--------- | 15 | Poor <br> Bottom layer Thickest layer |  | Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.01 |
|  |  |  | 0.00 | Thickest layer | 0.12 |
| 46: |  |  |  |  |  |
| Pamlico-------- | 40 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.00 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.08 |
| Olustee-------- | 32 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.00 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.05 |
| Pottsburg------- | 25 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.75 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.86 |

Table 16.--Source of Gravel and Sand-Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{gathered}\right.$ | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| 47: |  |  |  |  |  |
| Clara-------------- | 55 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.36 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.36 |
| Meadowbrook-------- - | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.05 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.64 |
| 49: |  |  |  |  |  |
| Sapelo------------- | 60 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.09 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.19 |
| Mascotte----------- | 20 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.03 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.06 |
| Plummer------------ | 16 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.38 |
| 51: |  |  |  |  |  |
| Plummer------------ | 85 | Poor |  | Fair |  |
|  |  |  | 0.00 | Bottom layer |  |
|  |  | Thickest layer | $0.00$ | Thickest layer | 0.38 |
| 52: |  |  |  |  |  |
| Plummer----------- | 90 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.38 |
| 54 : |  |  |  |  |  |
| Plummer------------ | 90 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.38 |
| 59 : |  |  |  |  |  |
| Troup-------------- | 90 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.14 |
| 60 : |  |  |  |  |  |
| Troup-------------- | 85 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 |  | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.14 |
| 61: |  |  |  |  |  |
| Udorthents--------- | 80 | Not rated |  | Not rated |  |
| Pits--------------- | 20 | Not rated |  | Not rated |  |
| 65: |  |  |  |  |  |
| Garcon------------- - | 55 | Poor |  | \| Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.07 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.26 |
| Eunola-------------- | 40 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.00 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.11 |

Table 16.--Source of Gravel and Sand--Continued

| $\begin{aligned} & \text { Map symbol } \\ & \text { and soil name } \end{aligned}$ | Pct. <br> of <br> map <br> unit | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| 68 : |  |  |  |  |  |
| Mascotte-------- | 55 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.03 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.06 |
| Plummer--------- | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.38 |
| 69 : |  |  |  |  |  |
| Osier----------- | 45 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.30 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.35 |
| Bibb------------ | 27 | Poor |  | Poor |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.00 |
| Albany--------- | 18 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.01 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.12 |
| 71: |  |  |  |  |  |
| Otela----------- | 42 | Poor |  | \|Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.71 |
| Alpin----------- | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Thickest layer | 0.23 |
|  |  | Thickest layer | 0.00 | Bottom layer | 0.40 |
| Chiefland--- | 20 | Not rated |  | Not rated |  |
| 72 : |  |  |  |  |  |
| Ousley---------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.38 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.40 |
| Blanton-------- | 28 | Poor <br> Bottom layer Thickest layer |  | \| Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.03 |
|  |  |  | 0.00 | Thickest layer | 0.20 |
| Fluvaquents----- | 26 | Poor <br> Bottom layer Thickest layer |  | Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.05 |
|  |  |  | 0.00 | Thickest layer | 0.16 |
| 73 : |  |  |  |  |  |
| Boulogne------- | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.13 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.34 |
| Chipley-------- | 30 | Poor Bottom layer Thickest layer |  | Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.17 |
|  |  |  | 0.00 | Thickest layer | 0.17 |
| Hurricane------- | 20 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.25 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.34 |

Table 16.--Source of Gravel and Sand-Continued

| $\begin{aligned} & \text { Map symbol } \\ & \text { and soil name } \end{aligned}$ | Pct. <br> of <br> map <br> unit | Potential source of gravel |  | Potential source of sand |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rating class | Value | Rating class | Value |
| 74: |  |  |  |  |  |
| Surrency------- | 35 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.21 |
| Plummer--------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.38 |
| Cantey--------- | 25 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.09 |
| 76 : |  |  |  |  |  |
| Wampee---------- | 51 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.11 |
| Blanton--------- | 38 | Poor <br> Bottom layer Thickest layer |  | Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.03 |
|  |  |  | 0.00 | Thickest layer | 0.20 |
| 77 : |  |  |  |  |  |
| Wampee--------- | 65 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.02 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.11 |
| Blanton-------- | 30 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| 79 : |  |  |  |  |  |
| Blanton-------- | 87 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| 80 : |  |  |  |  |  |
| Bonneau--------- | 80 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.00 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.25 |
| 81: |  |  |  |  |  |
| Blanton--------- | 40 | Poor ${ }^{\text {a }}$ - 00 |  | Fair |  |
|  |  |  |  | Bottom layer | 0.03 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.20 |
| Bonneau--------- | 30 | Poor <br> Bottom layer Thickest layer |  | Fair |  |
|  |  |  | 0.00 | Bottom layer | 0.00 |
|  |  |  | 0.00 | Thickest layer | 0.25 |
| Ichetucknee----- | 20 | Poor <br> Bottom layer Thickest layer |  | Poor |  |
|  |  |  | 0.00 | Bottom layer | 0.00 |
|  |  |  | 0.00 | Thickest layer | 0.00 |
| 83 : |  |  |  |  |  |
| Urban land------ | 96 | Not rated |  | Not rated |  |
| 86 : |  |  |  |  |  |
| Aquents-------- | 95 | Poor |  | Fair |  |
|  |  | Bottom layer | 0.00 | Bottom layer | 0.28 |
|  |  | Thickest layer | 0.00 | Thickest layer | 0.51 |

Table 17.--Source of Reclamation Material, Roadfill, and Topsoil
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99 . The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

| Map symbol and soil name | Pct. <br> of <br> map <br> 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 |
| 45: |  |  |  |  |  |  |  |
| Foxworth-------- | 25 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Too acid | 0.98 |
|  |  | Organic matter | 0.12 |  |  |  |  |
|  |  | Too acid | 0.54 |  |  |  |  |
|  |  | Droughty | 0.99 |  |  |  |  |
| Albany--------- | 15 | Poor |  | Fair | 0.53 | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Wetness depth | 0.53 |
|  |  | Organic matter | 0.18 |  |  | Too acid | 0.92 |
|  |  | Too acid | 0.39 |  |  |  |  |
|  |  | Droughty | 0.97 |  |  |  |  |
| 46: |  |  |  |  |  |  |  |
| Pamlico--------- | 40 | Poor |  | Poor | 0.00 | Poor |  |
|  |  | Wind erosion | 0.00 | Wetness depth |  | Wetness depth | 0.00 |
|  |  | Too acid | 0.50 |  |  | Organic matter content high Too acid | 0.00 |
|  |  |  |  |  |  |  | 0.12 |
| Olustee--------- | 32 | Poor |  | Poor |  | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth | 0.00 | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Wetness depth | 0.00 |
|  |  | Too acid | 0.12 |  |  |  | 0.88 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
| Pottsburg------- | 25 | Poor |  | Poor | 0.00 | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Wetness depth | 0.00 |
|  |  | Too acid | 0.39 |  |  | Too acid | 0.92 |
| 47 : |  |  |  |  |  |  |  |
| Clara---------- | 55 | Poor |  | Poor |  | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth | 0.00 | Too sandy Wetness depth | $\left\lvert\, \begin{aligned} & 0.00 \\ & 0.00 \end{aligned}\right.$ |
|  |  | Wind erosion | 0.00 |  |  |  |  |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
| Meadowbrook----- | 35 | Poor |  | PoorWetness depth | 0.00 | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Organic matter content low | 0.12 | Wetness depth |  | Wetness depth | 0.00 |
|  |  | Too acid | 0.68 |  |  |  |  |
|  |  | Droughty | 0.99 |  |  |  |  |
| 49: |  |  |  |  |  |  |  |
| Sapelo---------- | 60 | Poor |  | Poor |  | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth | 0.00 | Too sandy <br> Wetness depth Too acid | 0.00 |
|  |  | Wind erosion | 0.00 |  |  |  | 0.00 |
|  |  | Too acid | 0.12 |  |  |  | 0.59 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |

Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued


Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

| Map symbol and soil name | Pct. <br> 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 |
| 74: |  |  |  |  |  |  |  |
| Surrency-------- | 35 | Poor |  | Poor | 0.00 | Poor | 0.00 |
|  |  | Too sandy | 0.00 | Wetness depth |  | Hard to reclaim (dense layer) |  |
|  |  | Wind erosion | 0.00 |  |  |  |  |
|  |  | Organic mattercontent low | 0.12 |  |  | Too sandy | 0.00 |
|  |  |  |  |  |  | Wetness depth | 0.00 |
|  |  | Too acid | 0.50 |  |  | Too acid | 0.59 |
| Plummer--------- | 30 | Poor |  | Poor | 0.00 | Poor |  |
|  |  | Too sandy | 0.00 | Wetness depth |  | Wetness depth | 0.00 |
|  |  | Wind erosion | 0.00 |  | 0.00 |  | 0.00 |
|  |  | Too acid | 0.12 |  |  |  | 0.59 |
|  |  | Organic matter content low | 0.50 |  |  |  |  |
| Cantey---------- | 25 | Poor |  | Poor |  | Poor |  |
|  |  | Too clayey | 0.00 | Wetness depth | 0.00 | Wetness depth | 0.00 |
|  |  | Organic matter | 0.12 | Low strength | 0.10 | Too clayey | 0.00 |
|  |  | content low |  | Shrink-swell | 0.95 | Too acid | 0.59 |
|  |  | Too acid | 0.50 |  |  |  |  |
| 76: |  |  |  |  |  |  |  |
| Wampee---------- | 51 | Poor |  | Fair | 0.53 | Poor |  |
|  |  | Wind erosion | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Too sandy | 0.00 | Wetness depth |  | Wetness depth | 0.53 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
|  |  | Too acid | 0.68 |  |  |  |  |
| Blanton--------- | 38 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too acid | 0.00 |
|  |  | Wind erosion | 0.00 |  |  |  | 0.98 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
|  |  | Too acid | 0.54 |  |  |  |  |
| 77: |  |  |  |  |  |  |  |
| Wampee---------- | 65 | Poor |  | Fair |  | Poor |  |
|  |  | Wind erosion | 0.00 | Wetness depth | 0.12 | Too sandy | 0.00 |
|  |  | Too sandy | 0.00 |  |  | Slope | 0.09 |
|  |  | Organic matter content low | 0.12 |  |  | Wetness depth | 0.12 |
|  |  | Too acid | 0.68 |  |  |  |  |
| Blanton--------- | 30 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | slope | 0.09 |
|  |  | Organic matter content low | 0.12 |  |  | Too acid | 0.98 |
|  |  | Too acid | 0.54 |  |  |  |  |
| 79: |  |  |  |  |  |  |  |
| Blanton-- | 87 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.000.98 |
|  |  | Wind erosion | 0.00 |  |  | Too acid |  |
|  |  | Organic matter content low | 0.12 |  |  |  | 0.98 |
|  |  | Too acid | 0.54 |  |  |  |  |
|  |  |  |  |  |  |  |  |

Table 17.--Source of Reclamation Material, Roadfill, and Topsoil--Continued

| Map symbol and soil name | $\left\lvert\, \begin{gathered} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{gathered}\right.$ | 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 |
| 80: |  |  |  |  |  |  |  |
| Bonneau- | 80 | Poor |  | \| Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy |  |
|  |  | Wind erosion | 0.00 |  |  | Too acid | 0.98 |
|  |  | Organic matter | 0.12 |  |  |  |  |
|  |  | ```content low Too acid``` | 0.50 |  |  |  |  |
| 81: |  |  |  |  |  |  |  |
| Blanton-------- | 40 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Too acid | 0.98 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
|  |  | Too acid | 0.54 |  |  |  |  |
| Bonneau-------- | 30 | Poor |  | Good |  | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Wind erosion | 0.00 |  |  | Too acid | 0.98 |
|  |  | Organic matter content low | 0.12 |  |  |  |  |
|  |  | Too acid | 0.50 |  |  |  |  |
| Ichetucknee----- | 20 | Poor |  | Fair |  | Poor |  |
|  |  | Wind erosion | 0.00 | Wetness depth | 0.53 | Too clayey | 0.00 |
|  |  | Too clayey | 0.00 | Shrink-swell | 0.95 | Wetness depth | 0.53 |
|  |  | Too acid | 0.50 |  |  |  |  |
|  |  | Organic matter content low | 0.50 |  |  |  |  |
| 83 : |  |  |  |  |  |  |  |
| Urban land----- | 96 | Not rated |  | Not rated |  | Not rated |  |
| 86 : |  |  |  |  |  |  |  |
| Aquents--------- | 95 | Poor |  | PoorWetness depth | 0.00 | Poor |  |
|  |  | Too sandy | 0.00 |  |  | Too sandy | 0.00 |
|  |  | Too acid | 0.50 |  |  | Wetness depth | 0.00 |
|  |  | Droughty | 0.62 |  |  | Too acid | 0.59 |

Table 18.--Ponds and Embankments
[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

| Map symbol and soil name | $\left\|\begin{array}{c} \text { Pct. } \\ \text { of } \\ \text { map } \\ \text { unit } \end{array}\right\|$ | 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 : |  |  |  |  |  |  |  |
| Ocilla------------- | 40 | \|Very limited Seepage | 1.00 | ```Very limited Depth to saturated zone Seepage``` | 0.99 0.13 | Very limited Cutbanks cave Depth to saturated zone | $\text { \| } 1.00$ |
| Albany------------- | 30 | Very limited Seepage | 1.00 | ```Very limited Depth to saturated zone Seepage``` | 0.99 0.12 | Very limited Cutbanks cave Depth to saturated zone | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.01 \end{aligned}\right.$ |
| Blanton------------ | 18 | \|Very limited Seepage | 1.00 | Somewhat limited Seepage | 0.20 | Very limited Cutbanks cave Depth to saturated zone Slow refill | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.99 \\ & 0.46 \end{aligned}\right.$ |
| $4:$ |  |  |  |  |  |  |  |
| Blanton------------ |  | Seepage | 1.00 | Seepage | 0.20 | Cutbanks cave Depth to saturated zone Slow refill | $\left\lvert\, \begin{aligned} & 1.00 \\ & 0.99 \\ & 0.46 \end{aligned}\right.$ |
| $5:$ |  |  |  |  |  |  |  |
| Blanton------------ |  | Seepage | 1.00 | Seepage | 0.20 | Cutbanks cave | 1.00 |
|  |  |  |  |  |  | Depth to saturated zone Slow refill | 0.99 0.46 |
| Bonneau------------ | 36 | Very limited |  | Somewhat limited |  | Very limited |  |
|  |  | Seepage | 1.00 | \| Seepage | 0.25 | Cutbanks cave | 1.00 |
|  |  |  |  |  |  | Depth to saturated zone Slow refill | 0.90 0.28 |
| 7 : |  |  |  |  |  |  |  |
| Bigbee------------- | 40 | Very limited |  | Somewhat limited |  | Very limited |  |
|  |  | Seepage | 1.00 | Seepage | 0.44 | Cutbanks cave | 1.00 |
|  |  |  |  |  |  | Depth to saturated zone | 0.98 |
| Garcon------------- | 30 | \| Very limited |  | \| Very limited |  | Very limited |  |
|  |  | Seepage | 1.00 | Depth to | 0.99 | Cutbanks cave | 1.00 |
|  |  |  |  | saturated zone Seepage | 0.26 | Depth to saturated zone | 0.01 |
| Meggett------------ \| | 20 | Not limited |  | Very limited |  | Somewhat limited |  |
|  |  |  |  | Ponding | 1.00 | Cutbanks cave | 0.10 |
|  |  |  |  | Depth to saturated zone Piping | 1.00 0.42 |  |  |

Table 18.--Ponds and Embankments--Continued


Soil Survey of Suwannee County, Florida

Table 18.--Ponds and Embankments--Continued


Table 18.--Ponds and Embankments--Continued


Soil Survey of Suwannee County, Florida

Table 18.--Ponds and Embankments--Continued


Table 18.--Ponds and Embankments--Continued


Table 18.--Ponds and Embankments--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 |
| 46 : |  |  |  |  |  |  |  |
| Pamlico--------- | 40 | Very limited Seepage | 1.00 | ```Very limited Ponding Depth to saturated zone Seepage``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 0.08 \end{aligned}\right.$ | Very limited Cutbanks cave | 1.00 |
| Olustee--------- | 32 | Very limited Seepage | 1.00 | Very limited | 1.00 | Very limited Cutbanks cave | 1.00 |
|  |  |  |  | Depth to saturated zone Seepage | 1.00 0.05 |  |  |
| Pottsburg------- | 25 | Very limited Seepage | 1.00 | ```\|Very limited Ponding Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  | 0.86 |  |  |
| 47:clara |  |  |  |  |  |  |  |
|  | 55 | Very limited Seepage | \| 1.00 | \| Very limited |  | Very limited | 1.00 |
|  |  |  |  | Ponding | 1.00 | Cutbanks cave |  |
|  |  |  |  | Depth to | 1.00 |  |  |
|  |  |  |  | Seepage | 0.36 |  |  |
| Meadowbrook----- | 35 | Very limited Seepage | 1.00 | ```Very limited Ponding Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | 0.64 |  |  |
| 49 : |  |  |  |  |  |  |  |
| Sapelo---------- | 60 | Very limited Seepage | 1.00 | ```Very limited Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave | 1.00 |
|  |  |  |  |  | 1.00 |  |  |
|  |  |  |  |  | 0.19 |  |  |
| Mascotte------- | 20 | Somewhat limited Seepage | 0.72 | Very limited Depth to saturated zone |  | Very limited Cutbanks cave |  |
|  |  |  |  |  | 1.00 |  | 1.00 |
|  |  |  |  | Seepage | 0.06 |  |  |
| Plummer--------- | 16 | Very limited Seepage |  | ```Very limited Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave |  |
|  |  |  | 1.00 |  | 1.00 |  | 1.00 |
|  |  |  |  |  | 0.38 |  |  |
| 51: |  |  |  |  |  |  |  |
| Plummer-------- | 85 | Very limited Seepage | 1.00 | ```\|ery limited Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave |  |
|  |  |  |  |  | 1.00 |  | 1.00 |
|  |  |  |  |  | 0.38 |  |  |
| 52 : |  |  |  |  |  |  |  |
| Plummer--------- | 90 | Very limited Seepage | 1.00 | ```Very limited Ponding Depth to saturated zone Seepage``` |  | Very limited Cutbanks cave |  |
|  |  |  |  |  | 1.00 |  | 1.00 |
|  |  |  |  |  | 1.00 0.38 |  |  |

Table 18.--Ponds and Embankments--Continued


Soil Survey of Suwannee County, Florida

Table 18.--Ponds and Embankments--Continued


Table 18.--Ponds and Embankments--Continued


Soil Survey of Suwannee County, Florida

| $\begin{aligned} & \text { Map symbol } \\ & \text { and soil name } \end{aligned}$ | Pct. <br> of <br> map <br> 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 |
| 81: |  |  |  |  |  |  |  |
| Ichetucknee- | 20 | Not limited |  | ```Very limited Depth to saturated zone Piping``` | $\left\lvert\, \begin{aligned} & 0.99 \\ & 0.91 \end{aligned}\right.$ | Very limited Depth to water | 1.00 |
| $83 \text { : }$ |  |  |  |  |  |  |  |
| 86: |  |  |  |  |  |  |  |
| Aquents-------- | 95 | Very limited Seepage | 1.00 | ```Very limited Ponding Depth to saturated zone Seepage``` | $\left\lvert\, \begin{aligned} & 1.00 \\ & 1.00 \\ & 0.51 \end{aligned}\right.$ | Very limited Cutbanks cave | 1.00 |

|rable 19.--Engineering Properties
[Absence of an entry indicates that the data were not estimated]


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification |  | Fragments |  | Percentage passing sieve number-- |  |  |  | Liquid <br> limit | Plas-ticity index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unified | AASHTO | $\begin{gathered} \hline>10 \\ \text { inches } \end{gathered}$ | $\begin{gathered} 3-10 \\ \text { inches } \end{gathered}$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 4 | 10 | 40 | 200 |  |  |
| $26:$ <br> Albany | In |  |  |  | Pct | Pct |  |  |  |  | Pct |  |
|  | 0-7 | Fine sand | SM, SP-SM | A-2 | 0 | 0 | 100 | 100 | 75-90 | 10-20 | 0-14 | NP |
|  | 7-49 | Fine sand | SM, SP-SM | A-2 | 0 | 0 | 100 | 100 | 75-90 | 10-20 | 0-14 | NP |
|  | 49-60 | Sandy loam, fine sandy loam, sandy clay loam | SC, SC-SM | A-4, A-2, A-6\| | 0 | 0 | 97-100 | 95-100 | 75-95 | 20-50 | 25-44 | 8-25 |
|  | 60-80 | Sandy clay <br> loam, sandy <br> loam, fine sandy loam | SC, SC-SM | $\begin{gathered} A-2-6, ~ A-2, ~ \\ A-4, A-6 \end{gathered}$ | 0 | 0 | 97-100 | 95-100 | 70-100 | 20-50 | 0-40 | NP-17 |
| Chipley------- | $\begin{aligned} & 0-6 \\ & 6-80 \end{aligned}$ | Fine sand <br> Fine sand, sand | $\begin{aligned} & \text { SP-SM } \\ & \text { SP-SM } \end{aligned}$ | $\begin{array}{ll} A-2-4, & A-3 \\ A-2-4, & A-3 \end{array}$ | 00 | 00 | 100 | 100 | 80-100 | 6-12 | 0-14 | NP |
|  |  |  |  |  |  |  | 100 | 100 | 80-100 | 6-12 | 0-14 | NP |
| 29: |  | \| |  |  |  |  |  |  |  |  |  |  |
| Alpin--------- | 0-6 | $\mid$ Fine sand$\mid$ Fine sand, sand |  | A-2-4, A-3 | 0 | 0 | 95-100 | 90-100 | 60-100 | 5-20 | 0-14 | NP |
|  | 6-65 |  | SM, SP-SM | A-2-4, A-3 | 0 | 0 | 95-100\| | 90-100 | 60-100 | 5-20 | 0-14 | NP |
|  | 65-80 | Fine sand, loamy fine sand | SM, SP-SM | A-2-4 | 0 | 0 | 95-100 | \| 90-100| | 60-100 | 11-20 | 0-14 | NP |
| $30:$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Alpin-------- | 0-6 | \|Fine sandFine sand, sand | SM, SP-SM | A-2-4,A-2-4,A-3 | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 95-100 | \| 90-100| | 60-100 | 5-20 | 0-14 | NP |
|  | 6-65 |  | SM, SP-SM |  |  |  | 95-100\| | 90-100 | 60-100 | 5-20 | 0-14 | NP |
|  | 65-80 | $\begin{aligned} & \text { Fine sand, } \\ & \text { loamy fine } \\ & \text { sand } \end{aligned}$ | SM, SP-SM | A-2-4 | 0 | 0 | 95-100 | \| 90-100| | 60-100\| | 11-20 | 0-14 | NP |
| $32:$Leo |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 0-4 | $\mid$ Fine sand | \| SP, SP-SM | A-3, A-2-4 | 0 | 0 | 100 | 100 | 80-100\| | 2-12 | 0-14 | NP |
|  | 4-10 | $\mid$ Fine sand$\mid$ Fine sand, sand |  | A-3, A-2-4 | 0 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
|  | 10-17 |  | $\begin{array}{\|l\|} \text { SP, SP-SM } \\ \mid S P-S M, ~ S P \end{array}$ | A-3, A-2-4 | 0 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |
|  | 17-63 | Fine sand, sand, loamy sand \|Fine sand, sand, loamy sand | \|SP-SM, SM, SP| | A-3, A-2-4 | 0 | 0 | 100 | 100 | \|80-100| | 3-20 | 0-14 | NP |
|  | 63-80 |  | SP-SM, SP | A-3, A-2-4 | 0 | 0 | 100 | 100 | 80-100 | 2-12 | 0-14 | NP |

Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification |  | Fragments |  | Percentage passing sieve number-- |  |  |  | Liquid <br> limit | $\begin{array}{\|l} \text { Plas- } \\ \mid \text { ticity } \\ \text { index } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unified | AASHTO | $\begin{aligned} & >10 \\ & \text { inches } \end{aligned}$ | $\left\lvert\, \begin{gathered} 3-10 \\ \text { inches } \end{gathered}\right.$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 4 | 10 | 40 | 200 |  |  |
|  | In |  |  |  | Pct | Pct |  |  |  |  | Pct |  |
| 72: |  |  |  |  |  |  |  |  |  |  |  |  |
| Blanton-------- | 0-5 | Fine sand | \| SM, SP-SM | A-3, A-2-4 | 0 | 0 | 100 | 90-100 | 65-100 | 5-20 | 0-14 | NP |
|  | 5-41 | Fine sand | \|SM, SP-SM | A-3, A-2-4 | 0 | 0 | 100 | 90-100 | 65-100 | 5-20 | 0-14 | NP |
|  | 41-48 | Sandy loam, <br> loamy sand, loamy coarse sand | \| SM | A-2-4 | 0 | 0 | 100 | 95-100 | 65-96 | 13-30 | 10-25 | 3-12 |
|  | 48-80 | Sandy clay <br> loam, sandy <br> loam, sandy clay | \|SC, SC-SM, SM | $\begin{aligned} & A-2-6, A-2-4, \\ & A-4, A-6 \end{aligned}$ | 0 | 0 | 100 | 95-100 | 69-100 | 25-50 | 12-45 | 3-22 |
| Fluvaquents---- | 0-6 | Mucky fine sand\| | \|SP-SM, SP | A-3 | 0 | 0 | 100 | 100 | 93-96 | 2-6 | 0-14 | NP |
|  | 6-80 | Sandy loam, sandy clay loam, loamy sand | \|SC-SM, SC, SM| | A-2-6, A-2-4 | 0 | 0 | 100 | 100 | 50-70 | 15-35 | 0-35 | NP-13 |
| 73 : |  |  |  |  |  |  |  |  |  |  |  |  |
| Boulogne------- | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 0 | 100 | 100 | 85-100 | 3-10 | 0-14 | NP |
|  | 6-16 | Fine sand | \|SM, SP, SP-SM| | A-2-4, A-3 | 0 | 0 | 100 | 100 | 85-100 | 3-20 | 0-14 | NP |
|  | 16-31 | Fine sand | \|SP, SP-SM | A-3 | 0 | 0 | 100 | 100 | 85-100 | 3-10 | 0-14 | NP |
|  | 31-39 | Fine sand, loamy fine sand | \| SM, SP-SM | A-2-4 | 0 | 0 | 100 | 100 | 85-95 | 12-20 | 0-14 | NP |
|  | 39-80 | $\mid$ Fine sand | SM, SP-SM | A-2-4 | 0 | 0 | 100 | 100 | 85-95 | 12-20 | 0-14 | NP |
| Chipley-------- | 0-6 | Fine sand \| | \|SP-SM | A-2-4, A-3 |  | 0 | 100 | 100 | 80-100 | 6-12 | 0-14 | NP |
|  | 6-80 | Fine sand, sand\| | SP-SM | A-2-4, A-3 | 0 | 0 | 100 | 100 | 80-100 | 6-12 | 0-14 | NP |
| Hurricane------ | 0-6 | Fine sand | SP, SP-SM | A-3 | 0 | 0 | 100 | 100 | 78-100 | 3-8 | 0-14 | NP |
|  | 6-72 | Fine sand, sand\| | SP, SP-SM | A-3 | 0 | 0 | 100 | 100 | 78-100 | 3-8 | 0-14 | NP |
|  | 72-80 | Fine sand, sand\| | SP-SM, SM | A-3, A-2-4 | 0 | 0 | 100 | 100 | 80-100 | 5-15 | 0-14 | NP |
| 74: |  |  |  |  |  |  |  |  |  |  |  |  |
| Surrency------- | 0-8 | Fine sand | \| SM, SP-SM | A-2 | 0 | 0 | 100 | 95-100 | 86-100 | 10-20 | 0-14 | NP-6 |
|  | 8-16 | Fine sand | \| SM, SP-SM | A-2 | 0 | 0 | 100 | 95-100 | 86-100 | 10-20 | 0-14 | \| NP-6 |
|  | 16-38 | Fine sand | \| SM, SP-SM | A-2 | 0 | 0 | 100 | 95-100 | 86-100 | 10-20 | 0-14 | NP-6 |
|  | 38-80 | Sandy clay loam, sandy loam | \|SC, SC-SM | A-2, A-4, A-6\| | 0 | 0 | 100 | 95-100 | 80-86 | 30-44 | 20-35 | 6-15 |

Table 19.--Engineering Properties--Continued

| Map symbol and soil name | Depth | USDA texture | Classification |  | Fragments |  | Percentage passing sieve number-- |  |  |  | Liquid <br> limit | $\begin{aligned} & \text { Plas- } \\ & \text { ticity } \\ & \text { index } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unified | AASHTO | $\begin{gathered} \hline>10 \\ \text { inches } \end{gathered}$ | $\left\lvert\, \begin{gathered} 3-10 \\ \text { inches } \end{gathered}\right.$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 4 | 10 | 40 | 200 |  |  |
| 74:Plummer | In |  |  |  | Pct | Pct |  |  |  |  | Pct |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 0-7 | Fine sand | SM, SP-SM | A-2-4, A-3 | 0 | 0 | 100 | 100 | 75-90 | 5-20 | 0-14 | NP |
|  | 7-55 | Fine sand, sand\| | \|SM, SP-SM | A-2-4, A-3 | 0 | 0 | 100 | 100 | 75-90 | 5-20 | 0-14 | NP |
|  | 55-80 | ```Sandy clay loam, sandy loam, fine sandy loam``` | \| SC, SC-SM, SM | A-4, A-2-4 | 0 | 0 | 100 | 97-100 | 76-96 | 20-48 | 0-30 | NP-10 |
| Cantey------- | 0-5 | Sandy loam | SC, SC-SM, SM | A-2, A-4 | 0 | 0 | 98-100 | 98-100 | 60-85 | 30-50 | 0-30 | NP-10 |
|  | 5-9 | Sandy loam |  | A-2, A-4 | 0 | 0 | 98-100\| | 98-100 | 60-85 | 30-50 | 0-30 | NP-10 |
|  | 9-19 | Sandy loam | \|SC, SC-SM, SM | A-2, A-4 | 0 | 0 | 98-100\| | 98-100 | 60-85 | 30-50 | 0-30 | NP-10 |
|  | 19-80 | Sandy clay, clay | $\begin{gathered} \mathrm{CH}, \mathrm{CL}, \mathrm{MH}, \\ \underset{\mathrm{ML}}{ } \mid \end{gathered}$ | A-6, A-7 | 0 | 0 | 98-100\| | \| 98-100| | 75-100 | 55-95 | 28-66 | \|12-32 |
| 76 : |  |  |  |  |  |  |  |  |  |  |  |  |
| Wampee------- | 0-6 | \|Fine sand | SP-SM | A-2 | 0 | 0-3 | $90-100$ | \|80-100 | 70-98 | 5-12 | 0-14 | NP |
|  | 6-32 | $\|$Sandy clay <br> loam, gravelly <br> sandy clay <br> loam, sandy <br> loam | SP-SM | $\mid \mathrm{A}-2$ | 0 0 | $\begin{aligned} & 0-3 \\ & 0-3 \end{aligned}$ | $\left\|\begin{array}{c} 90-100 \\ 80-100 \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & 80-100 \\ & 68-98 \end{aligned}\right.$ |  | $\begin{array}{r} 5-12 \\ 25-50 \end{array}$ | $\left\lvert\, \begin{array}{r} 0-14 \\ 16-40 \end{array}\right.$ | $\begin{gathered} \text { NP } \\ 4-20 \end{gathered}$ |
|  | 32-80 |  | SC, SC-SM | \|A-2, A-4, A-6| | 0 | $0-3$ | $80-100$ | 68-98 | 65-95 | $25-50$ | $16-40$ | $4-20$ |
| Blanton------- | $\begin{aligned} & 0-5 \\ & 5-41 \end{aligned}$ | \|Fine sand <br> Fine sand | $\begin{array}{ll} \mid S M, & S P-S M \\ \mid S M, & S P-S M \\ \mid S M & \end{array}$ | $\left\lvert\, \begin{array}{ll} A-3, & A-2-4 \\ A-3, & A-2-4 \end{array}\right.$ | 0 | 0 | 100 | 90-100 | 65-100 | 5-20 | 0-14 | NP |
|  |  |  |  |  | 0 | 0 0 | 100 | $\|90-100\|$ | \| 65-100 |  | 0-14 | $\begin{gathered} \text { NP } \\ 3-12 \end{gathered}$ |
|  | 41-48 | Sandy loam, loamy sand, loamy coarse sand | $\begin{aligned} & \mid S M, \quad S P-S M \\ & \mid S M \end{aligned}$ | $\begin{aligned} & A-3, \quad A-2-4 \\ & A-2-4 \end{aligned}$ | 0 | 0 | 100 | 95-100 | \|65-96| | \|13-30 | 10-25 |  |
|  |  |  |  |  |  |  |  |  |  | 25-50 |  |  |
|  | 48-80 | ```\|Sandy clay ``` | SC, SC-SM, SM | $\begin{array}{\|l} \mathrm{A}-2-6, \mathrm{~A}-2-4, \\ \mathrm{~A}-4, \mathrm{~A}-6 \end{array}$ | 0 | 0 | 100 | 95-100 | 69-100 |  | 12-45 | 3-22 |
| 77: |  |  |  |  |  |  |  |  |  |  |  |  |
| Wampee------- | $\begin{gathered} 0-6 \\ 6-32 \\ 32-80 \end{gathered}$ | $\mid$ Fine sand <br> $\mid$ Fine sand, sand <br> $\mid$ Sandy clay <br> loam, gravelly <br> sandy clay <br> loam, sandy <br> loam | $\begin{aligned} & \mid S P-S M \\ & \mid S P-S M \\ & \mid S C, \quad S C-S M \end{aligned}$ | $\left\|\begin{array}{ll} \mid A-2 \\ A-2 \\ A-2, & A-4, \\ A-6 \end{array}\right\|$ | 0 | 0-3 | 90-100 | 80-100\| | 70-98 | $\begin{aligned} & 5-12 \\ & 5-12 \end{aligned}$ | $\begin{array}{r} 0-14 \\ 0-14 \\ 16-40 \end{array}$ | $\begin{gathered} \text { NP } \\ \text { NP } \\ 4-20 \end{gathered}$ |
|  |  |  |  |  | 0 | 0-3 | 90-100\| | 80-100 | 70-98 |  |  |  |
|  | 32-80 |  |  | \|A-2, A-4, A-6| | 0 | 0-3 | 80-100 | 68-98 | \|65-95 | 25-50 | 16-40 |  |

Table 19.--Engineering Properties--Continued


Table 19.--Engineering Properties--Continued

[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 | Silt | Clay | ```Moist bulk density``` | Permeability (Ksat) | $\left\|\begin{array}{c} \text { Available } \\ \text { water } \\ \text { capacity } \end{array}\right\|$ | Linear extensibility | Organic matter | Erosion factors |  |  | Wind \|erodi|bility group | \|Wind |erodibility |index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | Kw | Kf | T |  |  |
|  | In | PCt | PCt | $g / c c$ | In/hr | In/in | Pct | Pct |  |  |  |  |  |
| Ocilla---------- | 0-3 | 0-15 | 3-10 | 1.45-1.65 | 2-20 | 0.05-0.07 | 0.0-2.9 | 1.0-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 3-29 | 0-15 | 3-10 | 1.45-1.65 | 2-20 | 0.05-0.07 | 0.0-2.9 | 0.1-0.5 | . 10 | . 10 |  |  |  |
|  | 29-34 | 0-50 | 15-35 | 1.55-1.70 | 0.6-2 | 0.09-0.12 | 0.0-2.9 | 0.1-0.3 | . 24 | . 24 |  |  |  |
|  | 34-80 | 0-20 | 20-52 | 1.55-1.70 | 0.2-2 | 0.09-0.12 | 0.0-2.9 | 0.0-0.2 | . 24 | . 24 |  |  |  |
| Albany---------- | 0-7 | 0-15 | 1-10 | 1.40-1.55 | 6-20 | 0.02-0.04 | 0.0-2.9 | 1.0-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-49 | 0-15 | 1-10 | 1.40-1.55 | 6-20 | 0.02-0.04 | 0.0-2.9 | 0.1-0.5 | . 10 | . 10 |  |  |  |
|  | 49-60 | 0-50 | 13-35 | 1.55-1.65 | 2-6 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
|  | 60-80 | 0-28 | 13-35 | 1.55-1.65 | 0.2-2 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 1.0-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-2.0 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65 | 2-6 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70 | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 4: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65 | 2-6 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70 | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 5: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65 | 2-6 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70 | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| Bonneau--------- | 0-7 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.5-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-27 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 27-36 | 0-50 | 13-35 | 1.40-1.60 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
|  | 36-80 | 0-28 | 15-40 | 1.40-1.60 | 0.6-2 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 7 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bigbee---------- | 0-9 | 0-15 | 1-10 | 1.40-1.50 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.5-2.5 | . 10 | . 10 | 5 | 1 | 220 |
|  | 9-80 | 0-15 | 1-10 | 1.40-1.50 | 6-20 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | . 17 | . 17 |  |  |  |
| Garcon---------- | 0-7 | 0-15 | 3-8 | 1.25-1.50 | 6-20 | 0.10-0.15 | 0.0-2.9 | 1.0-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-26 | 0-30 | 3-8 | 1.40-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 26-51 | 0-50 | 12-30 | 1.55-1.70 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
|  | 51-60 | 0-30 | 3-8 | 1.40-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 60-80 | 0-15 | 3-6 | 1.50-1.70 | 6-20 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |

Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued

| Map symbol and soil name | Depth | Silt | Clay | $\begin{aligned} & \text { Moist } \\ & \text { bulk } \\ & \text { density } \end{aligned}$ | Permeability (Ksat) | $\left\lvert\, \begin{gathered} \text { Available } \\ \text { water } \\ \text { capacity } \end{gathered}\right.$ | Linear extensibility | Organic matter | Erosion factors |  |  | Wind erodibility group | Wind erodibility index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | Kw | Kf | T |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mascotte------- | 0-6 | 0-15 | 0-5 | 1.20-1.50 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.0-1.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-15 | 0-15 | 0-5 | 1.20-1.50 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.0-1.0 | . 10 | . 10 |  |  |  |
|  | 15-25 | 0-15 | 0-5 | 1.35-1.55 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 2.0-4.0 | . 15 | . 15 |  |  |  |
|  | 25-37 | 0-15 | 1-10 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
|  | 37-67 | 0-50 | 14-35 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
|  | 67-80 | 0-50 | 14-35 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
| Plummer--------- | 0-7 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 5.0-10 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-55 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.2-0.8 | . 10 | . 10 |  |  |  |
|  | 55-80 | 0-28 | 15-30 | 1.50-1.70 | 0.2-2 | 0.07-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
| 51: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 5.0-10 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-55 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.2-0.8 | . 10 | . 10 |  |  |  |
|  | 55-80 | 0-28 | 15-30 | 1.50-1.70 | 0.2-2 | 0.07-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
| 52 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 5.0-10 | . 10 | . 10 | 5 | 8 | 0 |
|  | 7-55 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.2-0.8 | . 10 | . 10 |  |  |  |
|  | 55-80 | 0-28 | 15-30 | 1.50-1.70 | 0.2-2 | 0.07-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
| 54 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | --- | --- | 0.40-0.65 | 0.6-6 | 0.24-0.26 | --- | 20-80 | --- | -- | 5 | 8 | 0 |
|  | 7-55 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.2-0.8 | . 10 | . 10 |  |  |  |
|  | 55-80 | 0-28 | 15-30 | 1.50-1.70 | 0.2-2 | 0.07-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
| 59 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Troup---------- | 0-8 | 0-15 | 1-10 | 1.30-1.70 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.5-1.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 8-52 | 0-15 | 1-10 | 1.30-1.70 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 52-80 | 0-28 | 15-35 | 1.40-1.60 | 0.6-2 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 60 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Troup----------- | 0-8 | 0-15 | 1-10 | 1.30-1.70 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.5-1.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 8-52 | 0-15 | 1-10 | 1.30-1.70 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 52-80 | 0-28 | 15-35 | 1.40-1.60 | 0.6-2 | 0.10-0.13 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 61: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Udorthents------- | 0-48 | 0-15 | 1-5 | 1.35-1.45 | 6-20 | 0.02-0.05 | 0.0-2.9 | 0.1-0.5 | . 10 | . 10 | 4 | 7 | 0 |
|  | 48-80 | 0-15 | 1-10 | 1.35-1.55 | 6-20 | 0.02-0.08 | 0.0-2.9 | 0.0-0.2 | . 10 | . 10 |  |  |  |
| Pits----------- | --- | --- | --- | - | --- | --- | - | - | --- | -- | -- | 8 | 0 |

Table 20.--Physical Soil Properties--Continued

| Map symbol and soil name | Depth | Silt | Clay | $\begin{aligned} & \text { Moist } \\ & \text { bulk } \\ & \text { density } \end{aligned}$ | Permea- <br> bility <br> (Ksat) | $\left\|\begin{array}{c} \text { Available } \\ \text { water } \\ \text { capacity } \end{array}\right\|$ | Linear extensibility | Organic matter | \|Erosion factors |  |  | Wind erodibility group | \|Wind erodibility <br> index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | Kw | Kf | T |  |  |
|  | In | PCt | Pct | $g / c c$ | In/hr | In/in | Pct | Pct |  |  |  |  |  |
|  | 0-7 | 0-15 | 3-8 | 1.25-1.50 | 6-20 | 0.10-0.15 | 0.0-2.9 | 1.0-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-26 | 0-30 | 3-8 | 1.40-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 26-51 | 0-50 | 12-30 | 1.55-1.70 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
|  | 51-60 | 0-30 | 3-8 | 1.40-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 60-80 | 0-15 | 3-6 | 1.50-1.70 | 6-20 | 0.05-0.08 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
| Eunola---------- | 0-7 | 0-15 | 3-11 | 1.45-1.70 | 2-6 | 0.06-0.11 | 0.0-2.9 | 0.5-2.0 | . 15 | . 15 | 5 | 1 | 220 |
|  | 7-18 | 0-30 | 3-11 | 1.45-1.70 | 2-6 | 0.06-0.11 | 0.0-2.9 | 0.5-2.0 | . 15 | . 15 |  |  |  |
|  | 18-56 | 0-28 | 18-45 | 1.30-1.60 | 0.6-2 | 0.12-0.16 | 0.0-2.9 | 0.0-0.5 | . 32 | . 32 |  |  |  |
|  | 56-80 | 0-30\| | 2-15 | 1.45-1.75 | 6-20 | 0.02-0.06 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 68 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mascotte-------- | 0-6 | 0-15 | 0-5 | 1.20-1.50 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.0-1.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-15 | 0-15 | 0-5 | 1.20-1.50 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.0-1.0 | . 10 | . 10 |  |  |  |
|  | 15-25 | 0-15 | 0-5 | 1.35-1.55 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 2.0-4.0 | . 15 | . 15 |  |  |  |
|  | 25-37 | 0-15 | 1-10 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
|  | 37-67 | 0-50\| | 14-35 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
|  | 67-80 | 0-50 | 14-35 | 1.35-1.50 | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-1.0 | . 24 | . 24 |  |  |  |
| Plummer--------- | 0-7 | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 5.0-10 | . 10 | . 10 | 5 | 1 | 220 |
|  | $7-55$ | 0-15 | 1-7 | 1.35-1.65 | 6-20 | 0.03-0.08 | 0.0-2.9 | 0.2-0.8 | . 10 | . 10 |  |  |  |
|  | 55-80 | 0-28 | 15-30 | 1.50-1.70 | 0.2-2 | 0.07-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
| 69 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Osier---------- |  | 0-15 | 1-10 | 1.35-1.60 | $6-20$ | 0.03-0.10 | 0.0-2.9 | 2.0-5.0 |  |  | 5 | 1 | 180 |
|  | 3-80 | 0-15 | 2-5 | 1.40-1.60 | 20-20 | 0.02-0.05 | 0.0-2.9 | 0.0-0.5 | . 05 | . 05 |  |  |  |
| Bibb------------ | 0-17 | 50-90 | 2-18 | 1.40-1.65 | 0.6-2 | 0.15-0.20 | 0.0-2.9 | 1.0-3.0 | . 28 | . 28 | 5 | 5 | 56 |
|  | 17-80 | 0-50\| | 2-18 | 1.45-1.75 | 0.6-2 | 0.10-0.20 | 0.0-2.9 | 0.5-1.0 | . 37 | . 37 |  |  |  |
| Albany---------- | 0-7 | 0-15 | 1-10 | 1.40-1.55 | 6-20 | 0.02-0.04 | 0.0-2.9 | 1.0-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-49 | 0-15 | 1-10 | 1.40-1.55 | 6-20 | 0.02-0.04 | 0.0-2.9 | 0.1-0.5 | . 10 | . 10 |  |  |  |
|  | 49-60 | 0-50\| | 13-35 | 1.55-1.65 | 2-6 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
|  | 60-80 | 0-28 | 13-35 | 1.55-1.65 | 0.2-2 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
| 71: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Otela----------- | 0-6 | 0-15 | 0-5 | 1.45-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.5-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-60 | 0-15 | 0-5 | 1.45-1.65 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 60-75 | 0-50 | 8-35 | 1.55-1.75 | 0.2-2 | 0.06-0.15 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
|  | 75-80 | 0-28 | 8-35 | 1.55-1.75 | 0.2-2 | 0.06-0.15 | 0.0-2.9 | 0.0-0.5 | . 24 | . 24 |  |  |  |
| Alpin----------- | 0-6 | 0-15 | 1-12 | 1.35-1.55 | 6-20 | 0.05-0.10 | 0.0-2.9 | 0.0-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-65 | 0-15 | 1-7 | 1.40-1.55 | 6-20 | 0.03-0.09 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 65-80 | 0-30 | 1-8 | 1.45-1.65 | 6-20 | 0.06-0.09 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |

Table 20.--Physical Soil Properties--Continued


Table 20.--Physical Soil Properties--Continued

| Map symbol and soil name | Depth | Silt | Clay | ```Moist bulk density``` | Permea- <br> bility <br> (Ksat) | $\begin{gathered} \text { Available } \\ \text { water } \\ \text { \|capacity } \end{gathered}$ | Linear extensibility | Organic matter | Erosion factors |  |  | Wind <br> erodi- <br> bility <br> group | Wind erodi- <br> bility <br> index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | Kw | Kf | T |  |  |
|  | In | Pct | Pct | $g / c c$ | In/hr | In/in | Pct | Pct |  |  |  |  |  |
| 76: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wampee---------- | 0-6 | 0-15 | 4-15 | 1.40-1.60\| | 2-20 | 0.05-0.10 | 0.0-2.9 | 1.0-4.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-32 | 0-15 | 4-15 | 1.40-1.60\| | 2-20 | \|0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 32-80 | 0-28 | 10-30 | 1.30-1.50\| | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 24 |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60\| | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65 | 2-6 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70\| | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 77: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wampee---------- | 0-6 | 0-15 | 4-15 | 1.40-1.60\| | 2-20 | 0.05-0.10 | 0.0-2.9 | 1.0-4.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 6-32 | 0-15 | 4-15 | 1.40-1.60 | 2-20 | 0.05-0.10 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 32-80 | 0-28 | 10-30 | 1.30-1.50\| | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 24 |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60\| | 6-20 | \|0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65\| | 2-6 | \|0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70\| | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 79 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60\| | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65\| | 2-6 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70\| | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 80: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bonneau--------- | 0-7 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.5-2.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 7-27 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 27-36 | 0-50 | 13-35 | 1.40-1.60\| | 0.6-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
|  | 36-80 | 0-28 | 15-40 | 1.40-1.60 | 0.6-2 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| 81: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | 0-15 | 1-7 | 1.30-1.60 | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.5-3.0 | . 10 | . 10 | 5 | 1 | 220 |
|  | 5-41 | 0-15 | 1-7 | 1.30-1.60\| | 6-20 | 0.03-0.07 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 41-48 | 0-50 | 10-18 | 1.50-1.65\| | 2-6 | \|0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 15 | . 15 |  |  |  |
|  | 48-80 | 0-28 | 12-40 | 1.60-1.70\| | 0.2-2 | 0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| Bonneau--------- | 0-7 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | \|0.04-0.08 | 0.0-2.9 | 0.5-2.0 | . 10 | .10 | 5 | 1 | 220 |
|  | 7-27 | 0-15 | 2-8 | 1.30-1.70 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.0-0.5 | . 10 | . 10 |  |  |  |
|  | 27-36 | 0-50 | 13-35 | 1.40-1.60\| | 0.6-2 | \|0.10-0.15 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
|  | 36-80 | 0-28 | 15-40 | 1.40-1.60 | 0.6-2 | 0.10-0.16 | 0.0-2.9 | 0.0-0.5 | . 20 | . 20 |  |  |  |
| Ichetucknee----- | 0-5 | 0-15 | 2-5 | 1.35-1.45 | 6-20 | 0.05-0.08 | 0.0-2.9 | 1.0-4.0 | . 15 | . 15 | 3 | 1 | 220 |
|  | 5-13 | 0-15 | 2-5 | 1.35-1.45 | 6-20 | 0.05-0.08 | 0.0-2.9 | 0.2-1.0 | . 15 | . 15 |  |  |  |
|  | 13-55 | 0-40 | 45-85 | 1.25-1.60 | 0.06-0.2 | 0.12-0.18 | 3.0-5.9 | 0.2-1.0 | . 24 | . 24 |  |  |  |
|  | 55-80 | --- | --- | --- | --- | --- | --- | --- | --- | --- |  |  |  |

Table 20.--Physical Soil Properties--Continued

| Map symbol and soil name | Depth | Silt | Clay | ```Moist bulk density``` | Permea- <br> bility <br> (Ksat) | Available water capacity | Linear extensibility | Organic <br> matter | Erosion factors |  |  | Wind erodibility group | Wind erodibility index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | Kw | Kf | T |  |  |
|  | In | PCt | Pct | $g / c c$ | In/hr | In/in | Pct | Pct |  |  |  |  |  |
| Urban land. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 86 : |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aquents - |  |  |  |  |  | 0.04-0.06 |  |  |  |  | 5 | 8 | 0 |
|  | 17-80 | 0-15 | 2-10 | 1.40-1.60 | 6-20 | 0.04-0.08 | 0.0-2.9 | 0.5-3.0 | . 17 | . 17 |  |  |  |

Table 21.--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 | $\begin{array}{\|c} \text { Soil } \\ \text { reaction } \end{array}$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2: | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
|  | 0-3 | - | 0.5-1.8 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 3-29 | --- | 0.1-3.9 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 29-34 | --- | 2.9-7.6 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 34-80 | --- | 4.1-13 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Albany---------- | 0-7 | --- | 0.1-1.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-49 | --- | 0.0-4.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 49-60 | --- | 0.4-4.7 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | - | 0.1-5.4 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 4: |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | - | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | - | 2.3-9.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 5 : |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 2.3-9.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau--------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | - | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | - | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 7 : |  |  |  |  |  |  |  |  |
| Bigbee---------- | 0-9 | --- | 0.4-5.4 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 9-80 | --- | 0.1-2.9 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Garcon---------- | 0-7 | --- | 0.6-2.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-26 | --- | 0.1-4.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 26-51 | --- | 3.6-15 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 51-60 | --- | 0.7-3.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.7-2.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Meggett--------- | 0-4 | 1.1-11 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 4-11 | 1.0-11 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 11-40 | 18-31 | --- | 6.1-8.4 | 0-15 | 0 | 0.0-2.0 | 0-4 |
|  | 40-80 | 13-26 | --- | 6.1-8.4 | 0-15 | 0 | 0.0-2.0 | 0-4 |
| 10: |  |  |  |  |  |  |  |  |
| Blanton--------- |  | --- | 0.2-1.3 | 4.5-6.0 |  |  | 0.0-2.0 |  |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Alpin---------- | 0-6 | 0.8-9.6 | - | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Bonneau-------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Padlock-------- | 0-5 | --- | 0.4-1.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-80 | 23-45 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
| 12: |  |  |  |  |  |  |  |  |
| Blanton-------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Chiefland------- | 0-8 | 0.6-2.8 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-33 | 0.5-2.7 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 33-39 | 7.8-18 | --- | 5.6-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | --- | --- | --- | --- | --- | --- |
| Ichetucknee----- | 0-5 | --- | 0.4-1.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-13 | --- | 0.1-3.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 13-55 | 23-45 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-59 | --- | --- | --- | --- | --- | -- | - |
| 13 : |  |  |  |  |  |  |  |  |
| Blanton-------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Alpin---------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau--------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 14: |  |  |  |  |  |  |  |  |
| Blanton-------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau-------- | 0-7 | - | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 15: |  |  |  |  |  |  |  |  |
| Blanton-------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\left\lvert\, \begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}\right.$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15:Lynchburg | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
|  | 0-9 | --- | 0.3-1.5 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 9-17 | --- | 0.0-3.6 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 17-80 | --- | 3.5-8.4 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau--------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 17: |  |  |  |  |  |  |  |  |
| Falmouth-------- | 0-3 | --- | 1.1-3.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 3-10 | --- | 0.0-2.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 10-17 | --- | 2.0-6.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 17-80 | 7.4-39 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau--------- | 0-7 | - | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 18: |  |  |  |  |  |  |  |  |
| Otela----------- | 0-6 | 0.0-1.9 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-60 | 0.0-1.9 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-75 | 2.7-12 | --- | 3.5-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 75-80 | 1.0-2.0 | --- | 3.5-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
| Chiefland------- | 0-8 | 0.6-2.8 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-33 | 0.5-2.7 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 33-39 | 7.8-18 | --- | 5.6-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | --- | --- | - | --- | --- | --- |
| Ichetucknee----- | 0-5 | --- | 0.4-1.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-13 | --- | 0.1-3.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 13-55 | 23-45 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-59 | --- | - | --- | --- | --- | --- | --- |
| 19 : |  |  |  |  |  |  |  |  |
| Chiefland------- | 0-8 | 0.6-2.8 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-33 | 0.5-2.7 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 33-39 | 7.8-18 | --- | 5.6-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | --- | --- | - | --- | --- | --- |
| $20:$ |  |  |  |  |  |  |  |  |
| Chiefland------- | 0-8 | 0.6-2.8 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-33 | 0.5-2.7 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 33-39 | 7.8-18 | --- | 5.6-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | --- | --- | --- | --- | 0.0 | --- |
| Pedro Variant---- | 0-3 | 1.0-5.0 | --- | 5.1-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 3-8 | 1.0-4.6 | --- | 5.1-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-11 | 11-27 | --- | 6.1-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 11-14 | --- | --- | --- | --- | --- | - | --- |
|  | 14-18 | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}$ | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Alaga----------- | 0-9 | --- | 0.3-4.4 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 9-80 | --- | 0.2-3.4 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| 22 : |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Padlock--------- | 0-5 | - | 0.4-1.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-80 | 23-45 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
| Alpin----------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 25 : |  |  |  |  |  |  |  |  |
| Pantego--------- | 0-10 | --- | 0.8-2.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 10-14 | --- | 0.1-8.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 14-45 | --- | 4.0-9.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 45-80 | --- | 4.0-9.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 26: |  |  |  |  |  |  |  |  |
| Hurricane------- | 0-6 | --- | 0.2-2.5 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-72 | --- | 0.0-2.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 72-80 | --- | 0.2-4.1 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Albany---------- | 0-7 | --- | 0.1-1.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-49 | --- | 0.0-4.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 49-60 | --- | 0.4-4.7 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Chipley--------- | 0-6 | 0.2-5.0 | 0.1-4.0 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-80 | 0.1-3.0 | 0.1-2.4 | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 29: |  |  |  |  |  |  |  |  |
| Alpin---------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 30: |  |  |  |  |  |  |  |  |
| Alpin---------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 32: |  |  |  |  |  |  |  |  |
| Leon----------- | 0-4 | --- | 0.2-3.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 4-10 | --- | 0.0-2.7 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 10-17 | --- | 0.4-4.1 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 17-63 | --- | 0.0-6.0 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 63-80 | --- | 0.4-4.1 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 34: |  |  |  |  |  |  |  |  |
| Falmouth------- | 0-3 | --- | 1.1-3.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 3-10 | --- | 0.0-2.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 10-17 | --- | 2.0-6.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 17-80 | 7.4-39 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |

Table 21.--Chemical Soil Properties--Continued


Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\begin{aligned} & \text { Soil } \\ & \text { reaction } \end{aligned}$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Blanton--------- | 0-5 | -- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Foxworth--------- | 0-11 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 11-62 | --- | 0.1-2.4 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 62-80 | --- | 0.0-1.9 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Alpin----------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 45: |  |  |  |  |  |  |  |  |
| Chipley--------- | 0-6 | --- | 0.8-4.0 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-80 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Foxworth-------- | 0-11 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 11-62 | --- | 0.1-2.4 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 62-80 | --- | 0.0-1.9 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Albany--------- | 0-7 | --- | 0.1-1.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-49 | --- | 0.0-4.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 49-60 | --- | 0.4-4.7 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| 46: |  |  |  |  |  |  |  |  |
| Pamlico--------- | 0-22 | --- | 2.5-7.5 | 3.5-4.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 22-80 | --- | 0.0-7.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Olustee--------- | 0-5 | --- | 0.5-5.1 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-18 | --- | 0.3-3.6 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 18-23 | --- | 0.6-4.6 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 23-37 | --- | 0.0-3.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 37-63 | --- | 0.3-6.9 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 63-80 | --- | 0.2-7.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Pottsburg------- | 0-7 | --- | 0.1-2.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-51 | --- | 0.0-4.4 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 51-65 | --- | 0.1-2.0 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | --- | 0.3-3.8 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| 47: |  |  |  |  |  |  |  |  |
| Clara----------- | 0-6 | --- | 2.5-7.5 | 3.5-4.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-18 | 0.8-2.6 | --- | 5.1-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 18-80 | 0.8-2.6 | --- | 5.1-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
| Meadowbrook----- | 0-8 | 0.4-1.0 | --- | 3.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-64 | 0.2-1.2 | --- | 3.5-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 64-80 | 2.1-6.4 | --- | 4.5-8.4 | 0-5 | 0 | 0.0-2.0 | 0-4 |
| 49 : |  |  |  |  |  |  |  |  |
| Sapelo---------- | 0-10 | --- | 0.1-3.2 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 10-22 | --- | 0.0-2.4 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 22-28 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 28-54 | --- | 0.0-3.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 54-80 | --- | 0.3-6.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Mascotte------- | 0-6 | -- - | 0.0-1.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-15 | --- | 0.0-3.1 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 15-25 | --- | 0.0-1.1 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 25-37 | --- | 0.2-4.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 37-67 | --- | 3.9-18 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 67-80 | --- | 3.9-18 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Plummer--------- | 0-7 | --- | 0.1-1.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 2.0-4.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 51: |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | --- | 0.1-1.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 2.0-4.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 52: |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | --- | 0.1-1.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 2.0-4.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 54: |  |  |  |  |  |  |  |  |
| Plummer--------- | 0-7 | --- | 2.5-7.5 | 3.5-4.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 0.5-4.6 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 59: |  |  |  |  |  |  |  |  |
| Troup----------- | 0-8 | --- | 0.2-0.5 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-52 | --- | 0.0-4.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 52-80 | --- | 0.3-0.6 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 60 : |  |  |  |  |  |  |  |  |
| Troup----------- | 0-8 | --- | 0.2-0.5 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-52 | --- | 0.0-4.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 52-80 | --- | 0.3-0.6 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 61: |  |  |  |  |  |  |  |  |
| Udorthents------ | 0-48 | 0.9-4.0 | --- | 7.4-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | 0.8-7.0 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
| Pits. |  |  |  |  |  |  |  |  |
| $65:$ |  |  |  |  |  |  |  |  |
| Garcon---------- | 0-7 | --- | 0.6-2.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-26 | --- | 0.1-4.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 26-51 | --- | 3.6-15 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 51-60 | --- | 0.7-3.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.7-2.4 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Eunola---------- | 0-7 | --- | 0.5-2.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-18 | --- | 0.2-9.3 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 18-56 | - | 2.0-12 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 56-80 | --- | 0.3-3.5 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 68 : |  |  |  |  |  |  |  |  |
| Mascotte-------- | 0-6 | --- | 0.0-1.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-15 | --- | 0.0-3.1 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 15-25 | - | 0.0-1.1 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 25-37 | --- | 0.2-4.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 37-67 | --- | 3.9-18 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 67-80 | --- | 3.9-18 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  |  |  |  |  |  |  |  |  |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\left\lvert\, \begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}\right.$ | Calcium carbonate | Gypsum | Salinity | ```Sodium adsorp- tion ratio``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Plummer- | 0-7 | --- | 0.1-1.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 2.0-4.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 69 : |  |  |  |  |  |  |  |  |
| Osier----------- | 0-3 | --- | 0.8-7.1 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 3-80 | --- | 0.2-1.6 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bibb------------ | 0-17 | --- | 4.0-10 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 17-80 | --- | 0.4-5.7 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Albany---------- | 0-7 | --- | 0.1-1.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-49 | --- | 0.0-4.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 49-60 | --- | 0.4-4.7 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-80 | --- | 0.4-4.1 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| 71: |  |  |  |  |  |  |  |  |
| Otela---------- | 0-6 | 0.0-1.9 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-60 | 0.0-1.9 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 60-75 | 2.7-12 | --- | 3.5-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 75-80 | 1.0-2.0 | --- | 3.5-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
| Alpin---------- | 0-6 | 0.8-9.6 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-65 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 65-80 | 0.8-6.1 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Chiefland------- | 0-8 | 0.6-2.8 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-33 | 0.5-2.7 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 33-39 | 7.8-18 | --- | 5.6-8.4 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | --- | --- | -- | --- | -- | -- |
| 72 : |  |  |  |  |  |  |  |  |
| Ousley--------- | 0-4 | --- | 0.1-1.1 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 4-80 | --- | 0.1-0.8 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Fluvaquents----- | 0-6 | 2.3-5.2 | --- | 5.6-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-80 | 6.8-23 | --- | 6.6-7.8 | 0 | 0 | 0.0-2.0 | 0-4 |
| 73 : |  |  |  |  |  |  |  |  |
| Boulogne------- | 0-6 | --- | 0.3-4.5 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-16 | --- | 0.3-4.5 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 16-31 | --- | 0.0-2.8 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 31-39 | --- | 0.3-5.5 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 39-80 | --- | 0.3-5.1 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
| Chipley-------- | 0-6 | --- | 0.8-4.0 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-80 | 0.8-5.4 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Hurricane------- | 0-8 | --- | 0.3-2.8 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-61 | --- | 0.0-2.2 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 61-80 | --- | 0.3-2.8 | 3.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |

Table 21.--Chemical Soil Properties--Continued

| Map symbol and soil name | Depth | Cation exchange capacity | Effective cation exchange capacity | $\begin{gathered} \text { Soil } \\ \text { reaction } \end{gathered}$ | Calcium carbonate | Gypsum | Salinity | Sodium adsorption ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | meq/100 g | meq/100 g | pH | Pct | Pct | mmhos/cm |  |
| Surrency-------- | 0-8 | --- | 0.0-1.7 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 8-16 | --- | 0.0-1.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 16-38 | --- | 0.0-3.9 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 38-80 | --- | 1.9-6.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Plummer---------- | 0-7 | --- | 0.1-1.3 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-55 | --- | 0.1-3.5 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | --- | 2.0-4.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Cantey---------- | 0-5 | --- | 0.3-0.6 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-9 | --- | 0.3-0.5 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 9-19 | --- | 0.1-9.6 | 3.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 19-80 | --- | 4.0-9.0 | 3.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 76 : |  |  |  |  |  |  |  |  |
| Wampee---------- | 0-6 | 2.2-8.2 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-32 | 2.1-8.0 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 32-80 | 5.1-16 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 77 : |  |  |  |  |  |  |  |  |
| Wampee---------- | 0-6 | 2.2-8.2 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 6-32 | 2.1-8.0 | --- | 4.5-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 32-80 | 5.1-16 | --- | 4.5-6.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 79 : |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 80: |  |  |  |  |  |  |  |  |
| Bonneau-------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| 81: |  |  |  |  |  |  |  |  |
| Blanton--------- | 0-5 | --- | 0.2-1.3 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-41 | --- | 0.0-3.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 41-48 | --- | 1.9-4.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 48-80 | --- | 5.0-10 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Bonneau-------- | 0-7 | --- | 0.1-1.2 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 7-27 | --- | 0.0-3.6 | 4.5-6.0 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 27-36 | --- | 0.5-4.7 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 36-80 | --- | 2.0-8.0 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
| Ichetucknee----- | 0-5 | --- | 0.4-1.2 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 5-13 | --- | 0.1-3.1 | 4.5-5.5 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 13-55 | 23-45 | --- | 5.1-7.3 | 0 | 0 | 0.0-2.0 | 0-4 |
|  | 55-80 | -- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |

Table 21.--Chemical Soil Properties--Continued


Table 22.--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]


Soil Survey of Suwannee County, Florida

Table 22.--Soil Features--Continued


Table 22.--Soil Features--Continued


Soil Survey of Suwannee County, Florida

Table 22.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer |  |  | Subsidence |  | ```c}\begin{array}{c}{\mathrm{ Potential }}\\{\mathrm{ for }}\\{\mathrm{ frost action }}``` | Risk of corrosion |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kind | $\begin{aligned} & \text { Depth } \\ & \text { to top } \end{aligned}$ | Hardness | Initial | Total |  | Uncoated steel | Concrete |
|  |  | In |  | In | In |  |  |  |
| 49: |  |  |  |  |  |  |  |  |
| Plummer------- | --- | - | --- | -- | --- | None | Moderate | High |
| 51: |  |  |  |  |  |  |  |  |
| Plummer------- | --- | --- | --- | --- | --- | None | Moderate | High |
| 52 : |  |  |  |  |  |  |  |  |
| Plummer------- | --- | --- | --- | --- | --- | None | Moderate | High |
| $54:$ |  |  |  |  |  |  |  |  |
| Plummer------- | --- | --- | --- | --- | --- | None | Moderate | \| High |
| 59 : |  |  |  |  |  |  |  |  |
| Troup--------- | --- | --- | --- | - | --- | None | Low | Moderate |
| 60 : |  |  |  |  |  |  |  |  |
| Troup--------- | --- | -- | --- | -- | --- | None | Low | Moderate |
| 61: |  |  |  |  |  |  |  |  |
| Udorthents---- | --- | - | - | --- | --- | None | High | Moderate |
| Pits. |  |  |  |  |  |  |  |  |
| 65 : |  |  |  |  |  |  |  |  |
| Garcon-------- | --- | --- | -- - | -- - | --- | None | High | High |
| Eunola-------- | --- | --- | --- | --- | --- | None | Low | \| High |
| 68 : |  |  |  |  |  |  |  |  |
| Mascotte------ | --- | --- | --- | --- | --- | None | High | High |
| Plummer-------- | --- | --- | --- | --- | --- | None | Moderate | High |
| 69 : |  |  |  |  |  |  |  |  |
| Osier--------- | --- | --- | -- - | --- | --- | None | High | \| High |
| Bibb---------- | --- | --- | --- | --- | --- | None | High | Moderate |
| Albany-------- | --- | --- | --- | --- | --- | None | High | \| High |
| 71: |  |  |  |  |  |  |  |  |
| Otela---------- | --- | --- | -- - | --- | -- - | None | Low | Low |
| Alpin--------- | --- | --- | --- | --- | --- | None | Low | High |
| Chiefland----- | ```Bedrock (paralithic)``` | 24-60 | Strongly cemented | --- | --- | None | Low | Low |
| 72: |  |  |  |  |  |  |  |  |
| Ousley-------- | - | --- | --- | --- | --- | None | Low | High |
| Blanton------- | --- | --- | --- | --- | --- | None | High | High |
| Fluvaquents---- | --- | --- | --- | --- | --- | None | Low | Moderate |
| 73 : |  |  |  |  |  |  |  |  |
| Boulogne------ | --- | --- | --- | - | --- | None | High | High |
| Chipley------- | --- | -- | -- | --- | --- | None | --- | --- |
| Hurricane----- | --- | --- | --- | --- | --- | None | Low | Moderate |

Soil Survey of Suwannee County, Florida

Table 22.--Soil Features--Continued

| Map symbol and soil name | Restrictive layer |  |  | Subsidence |  | $\begin{array}{\|c\|} \text { Potential } \\ \text { for } \\ \text { frost action } \end{array}$ | Risk of corrosion |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kind | $\left\lvert\, \begin{array}{r} \text { Depth } \\ \text { to top } \end{array}\right.$ | Hardness | Initial | Total |  | Uncoated steel | Concrete |
|  |  | In |  | In | In |  |  |  |
| Surrency------ | --- | --- | --- | --- | --- | None | High | High |
| Plummer------- | --- | --- | --- | --- | --- | None | Moderate | High |
| Cantey-------- | --- | --- | --- | --- | --- | None | High | High |
| 76: |  |  |  |  |  |  |  |  |
| Wampee-------- | --- | --- | --- | --- | --- | None | High | Moderate |
| Blanton-------- | --- | --- | --- | --- | - | None | High | High |
| 77: |  |  |  |  |  |  |  |  |
| Wampee-------- | --- | --- | --- | --- | -- | None | High | Moderate |
| Blanton-------- | --- | --- | --- | - | --- | None | High | High |
| 79 : <br> Blanton | --- | --- | --- | --- | --- | None | \| High | \| High |
| 80: <br> Bonneau | --- | --- | --- | --- | --- | None | Low | \| High |
| 81: |  |  |  |  |  |  |  |  |
| Blanton------- | --- | --- | --- | - | --- | None | High | High |
| Bonneau-------- | --- | --- | --- | -- | --- | None | \| Low | \| High |
| Ichetucknee---- | $\begin{aligned} & \text { \|Bedrock } \\ & \quad \text { (paralithic) } \end{aligned}$ | 50-75 | $\begin{array}{\|l\|l\|} \text { Strongly } \\ \text { cemented } \end{array}$ | -- | --- | None | High | High |
| 83 : <br> Urban land----- | --- | --- | --- | --- | - | None | --- | --- |
| 86 : <br> Aquents | --- | --- | --- | -- | --- | None | \| High | \| High |

## Fable 23.--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]


Table 23.--Water Features-Continued


Table 23.--Water Features--Continued


Table 23.--Water Features--Continued


Table 23.--Water Features--Continued

| Map symbol and soil name | Hydro- <br> logic <br> group | Surface runoff | Month | Water table |  | Ponding |  |  | Flooding |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Upper <br> limit | Lower <br> limit | Surface water depth | Duration | Frequency | Duration | Frequency |
|  |  |  |  |  |  |  |  |  |  |  |
| Ichetucknee- | D | Very high |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | --- | --- | - | None | --- | None |
|  |  |  | February | --- | --- | - | -- | None | --- | None |
|  |  |  | Mar-Nov | 1.5-3.0 | 3.0-5.0\| | --- | -- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |
| 19 : |  |  |  |  |  |  |  |  |  |  |
| Chiefland- | B | Very low | Mar-Nov | --- | --- | --- | --- | None | Brief | Occasional |
| 20 : |  |  |  |  |  |  |  |  |  |  |
| Chiefland- | B | Very low | Mar-Nov | --- | --- | --- | --- | None | Brief | Occasional |
| Pedro Variant------ | C | Very low |  |  |  |  |  |  |  |  |
|  |  |  | Mar-Nov | --- | --- | --- | --- | None | Brief | Occasional |
| 21: |  |  |  |  |  |  |  |  |  |  |
| Alaga------------- | A | Negligible | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 22: |  |  |  |  |  |  |  |  |  |  |
| Blanton------------ | A | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | --- | --- | --- | None | --- | None |
|  |  |  | February | - | - | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 3.5-6.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | - | --- | --- | None | --- |  |
| Padlock------------ | D | Very high |  |  |  |  |  |  |  |  |
|  |  |  |  | --- | --- | --- | --- |  | --- |  |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 1.5-3.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- |  |
| Alpin-------------- | A | Very low |  |  |  |  |  |  |  |  |
|  |  |  | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| $25:$ |  |  |  |  |  |  |  |  |  |  |
| Pantego------------ | D | Very high |  |  |  |  |  |  |  |  |
|  |  |  | January | 0.0-1.5 | >6.0 | --- | -- | None | --- | None |
|  |  |  | February | 0.0-1.5 | >6.0 | --- |  | None | --- | None |
|  |  |  | Mar-Nov | 0.0-1.5 | $>6.0$ | 0.0-2.0 | Long | Frequent | --- | None |
|  |  |  | December | 0.0-1.5 | >6.0 | --- | --- | None | --- | None |
|  |  |  |  |  |  |  |  |  |  |  |

Table 23.--Water Features-Continued

| Map symbol and soil name | \| Hydro- <br> logic <br> group | Surface runoff | Month | Water table |  | Ponding |  |  | Flooding |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Upper <br> limit | Lower <br> limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| 26: |  |  |  |  |  |  |  |  |  |  |
| Hurricane--------- | C | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | --- | -- | --- | None | -- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 2.0-3.5 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |
| Albany------------ | C | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | -- | --- | - | None | - | None |
|  |  |  | February | - | -- | --- | --- | None | - | None |
|  |  |  | Mar-Nov | 1.0-2.5 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- |  | --- | None | --- | None |
| Chipley----------- | C | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | --- | --- | --- | None | --- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 2.0-3.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | -- - | -- - | --- | -- | None | --- | None |
| 29 : |  |  |  |  |  |  |  |  |  |  |
| Alpin------------- | A | Very low | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| 30: |  |  |  |  |  |  |  |  |  |  |
| Alpin------------- | A | Very low | Jan-Dec | -- | --- | --- | --- | None | --- | None |
| 32: |  |  |  |  |  |  |  |  |  |  |
| Leon--------------- | B/D | Very low |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | --- | --- | --- |  | --- |  |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 0.5-1.5 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |
| 34: |  |  |  |  |  |  |  |  |  |  |
| Falmouth---------- | D | Very high |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | -- | --- | --- | None | --- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 1.5-3.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |
| Bonneau------------- | A | Low |  |  |  |  |  |  |  |  |
|  |  |  | January | -- | -- | --- | --- |  | --- |  |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 3.5-5.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |

Table 23.--Water Features--Continued


Table 23.--Water Features-Continued

| Map symbol and soil name | Hydro- <br> logic <br> group | Surface runoff | Month | Water table |  | Ponding |  |  | Flooding |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Upper <br> limit | Lower <br> limit | Surface water depth | Duration | Frequency | Duration | Frequency |
|  |  |  |  |  |  |  |  |  |  |  |
| Bigbee | A | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | \| January | 3.5-6.0\| | >6.0 | --- | --- | None | --- | --- |
|  |  |  | \| February | 3.5-6.0 | >6.0 | --- | --- | None | --- | - |
|  |  |  | Mar-Nov | 3.5-6.0\| | >6.0 | --- | --- | None | Brief | Occasional |
|  |  |  | \| December | 3.5-6.0 | >6.0 | --- | --- | None | --- | --- |
| 43 : |  |  |  |  |  |  |  |  |  |  |
| Blanton------------ | A | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | - | --- | --- | None | --- | None |
|  |  |  | \| February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 3.5-6.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December |  | --- | --- | -- | None | -- | None |
| Foxworth----------- | A | Very low |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | - | --- | --- | None | -- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | \| Mar-Nov | 4.0-6.0 | >6.0 | --- | --- | None | -- | None |
|  |  |  | December | -- | -- - | - | - | None | --- |  |
| Alpin------------- | A | Very low | \| Jan-Dec | --- | --- | - | --- | None | --- | None |
| 45: |  |  |  |  |  |  |  |  |  |  |
| Chipley----------- | C | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | - | --- | --- | None | --- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 2.0-3.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | - | --- | --- | --- | None | --- | None |
| Foxworth----------- | A | Very low |  |  |  |  |  |  |  |  |
|  |  |  | \| January | - | --- | --- | -- | None | --- | None |
|  |  |  | February | -- | -- | --- | --- | None | - | None |
|  |  |  | \| Mar-Nov | 4.0-6.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | -- | --- | --- | --- | None | --- | None |
| Albany------------- | C | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | January | --- | --- | - | - | None | --- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 1.0-2.5 | >6.0 | --- | --- | None | --- | None |
|  |  |  | December | --- | --- | --- | --- | None | --- | None |

Table 23.--Water Features--Continued


Table 23.--Water Features-Continued

| Map symbol and soil name | Hydrologic group | Surface runoff | Month | Water table |  | Ponding |  |  | Flooding |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { Upper } \\ & \text { limit } \end{aligned}$ | Lower <br> limit | Surface water depth | Duration | Frequency | Duration | Frequency |
|  |  |  |  | $F t$ | $F t$ | $F t$ |  |  |  |  |
| Plummer | $B / D$ | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | --- | --- | --- | None | --- | None |
|  |  |  | \| February | --- | - | -- | -- | None | --- | None |
|  |  |  | Mar-Nov | 0.5-1.0 | >6.0 | -- | --- | None | --- | None |
|  |  |  | \| December | --- | --- | - | --- |  | --- |  |
| 52 : |  |  |  |  |  |  |  |  |  |  |
| Plummer- | $B / D$ | Very low |  |  |  |  |  |  |  |  |
|  |  |  | \| January | 0.0-1.0 | >6.0 | --- | --- | None | --- |  |
|  |  |  | \| February | 0.0-1.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 0.0-1.0 | $>6.0$ | 0.0-2.0 | \| Very long | Frequent | --- | None |
|  |  |  | December | 0.0-1.0 | $>6.0$ | --- | \| --- | None | --- | None |
| 54 : |  |  |  |  |  |  |  |  |  |  |
| Plummer- | $B / D$ | Very high |  |  |  |  |  |  |  |  |
|  |  |  |  | 0.0-1.0 | >6.0 | --- | --- | None | --- |  |
|  |  |  | \| February | 0.0-1.0 | >6.0 | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | $0.0-1.0$ | $>6.0$ | 0.0-2.0 | \|Very long | Frequent | --- | None |
|  |  |  | December | $0.0-1.0$ | $>6.0$ | --- | \| --- | None | --- | None |
| 59 : |  |  |  |  |  |  |  |  |  |  |
| Troup- | A | Negligible |  |  |  |  |  |  |  |  |
|  |  |  | Jan-Dec | --- | --- | --- | --- | None | --- | None |
| $60:$ |  |  |  |  |  |  |  |  |  |  |
| Troup-- | A | Very low | Jan-Dec | - | --- | --- | --- | None | --- | None |
| 61: |  |  |  |  |  |  |  |  |  |  |
| Udorthents--------- | B | --- |  |  |  |  |  |  |  |  |
|  |  |  | \| January | --- | --- | --- | --- | None | --- | None |
|  |  |  | February | --- | --- | --- | --- | None | --- | None |
|  |  |  | Mar-Nov | 1.5-3.0 | >6.0 | -- - | -- - | None | --- | None |
|  |  |  | December | --- | -- | --- | --- | None | --- | None |
| Pits-------------- | --- | --- | \| Jan-Dec |  | --- | --- | --- | None | --- | None |
| 65: |  |  |  |  |  |  |  |  |  |  |
| Garcon- | C | Very low | Mar-Nov | 1.5-3.0 | >6.0 | --- | --- | None | Brief | Occasional |
| Eunola----- | C | Very high | Mar-Nov | 1.5-2.5 | >6. 0 | --- | --- | None | Brief | Occasional |
|  |  |  |  |  |  |  |  |  |  |  |

Table 23.--Water Features--Continued


Table 23.--Water Features-Continued


Table 23.--Water Features--Continued


Table 23.--Water Features--Continued

| Map symbol and soil name | Hydro- <br> logic <br> group | Surface runoff | Month | Water table |  | Ponding |  |  | Flooding |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Upper <br> limit | Lower <br> limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| 83 : |  |  |  | $F t$ | Ft | $F t$ |  |  |  |  |
|  |  |  | Jan-Dec | --- | --- | --- | - | None | -- | None |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | January | 0.0-1.0 | >6.0 | --- | --- | None | --- | -- |
|  |  |  | February | 0.0-1.0 | >6.0 | --- | --- | None | --- | --- |
|  |  |  | Mar-Nov | 0.0-1.0 | >6.0 | 0.0-2.0 | Long | Frequent | Long | Frequent |
|  |  |  | December | 0.0-1.0 | >6.0 | --- | --- | None | --- | --- |

Table 24.--Physical Analyses of Selected Soils
[Absence of an entry indicates that data were not available. See text for description of analysis methods]

| Soil name and sample number* | Depth |  | Horizon | $\begin{aligned} & \text { Total } \\ & \text { sand } \\ & (2-0.05 \\ & \mathrm{mm}) \end{aligned}$ | $\left\lvert\, \begin{gathered} \text { Silt } \\ (0.05- \\ 0.002 \\ \mathrm{~mm}) \end{gathered}\right.$ | $\begin{aligned} & \text { Clay } \\ & (<0.002 \\ & \mathrm{mm}) \end{aligned}$ | $\begin{array}{\|c} \text { Bulk } \\ \text { density } \\ 33 \mathrm{kPa} \end{array}$ | Water content 33 kPa | Water content $1,500$ kPa | WRD Whole soil | COLE Whole soil |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | Cm |  | Pct | Pct | Pct |  |  |  |  |  |
| Alpin: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-001-1 | 0-6 | 0-15 | A | 94.6 | 4.1 | 1.3 | 1.48 | 4.1 | 1.2 | 0.04 | 0.004 |
| S02FL-121-001-2 | 6-20 | 15-51 | E1 | 94.8 | 3.7 | 1.5 | --- | --- | 0.9 | --- | --- |
| S02FL-121-001-3 | 20-32 | 51-81 | E21 | 92.4 | 5.9 | 1.7 | --- | --- | 0.7 | --- | --- |
| S02FL-121-001-4 | 32-44 | 81-113 | E22 | 94.4 | 4.5 | 1.1 | --- | --- | 0.7 | --- | --- |
| S02FL-121-001-5 | 44-65 | 113-165 | E3 | 94.2 | 4.6 | 1.2 | --- | --- | 0.6 | --- | --- |
| S02FL-121-001-6 | 65-80 | 165-200 | E/Bt | 94.1 | 4.5 | 1.4 | 1.66 | 2.6 | 0.7 | 0.03 | 0.004 |
| Falmouth: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-002-1 | 0-3 | 0-8 | Ap | 92.4 | 5.4 | 2.2 | 1.45 | 10.4 | 4.7 | 0.08 | 0.031 |
| S02FL-121-002-2 | 3-10 | 8-25 | E | 91.4 | 6.4 | 2.2 | 1.79 | 3.6 | 2.0 | 0.03 | 0.002 |
| S02FL-121-002-3 | 10-17 | 25-43 | Bt1 | 62.7 | 4.9 | 32.4 | 1.31 | 27.9 | 14.1 | 0.18 | 0.069 |
| S02FL-121-002-4 | 17-30 | 43-76 | Bt2 | 46.8 | 3.7 | 49.5 | 1.32 | 29.7 | 19.2 | 0.14 | 0.079 |
| S02FL-121-002-5 | 30-43 | 76-109 | Btg1 | 51.8 | 4.3 | 43.9 | 1.43 | 26.3 | 17.3 | 0.13 | 0.055 |
| S02FL-121-002-6 | 43-65 | 109-165 | Btg2 | 46.2 | 2.0 | 51.8 | 1.00 | 40.9 | 24.4 | 0.27 | 0.214 |
| S02FL-121-002-7 | 65-80 | 165-200 | Cg | 50.9 | 1.5 | 47.6 | 1.05 | 48.6 | 22.6 | 0.22 | 0.155 |
| Padlock: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-004-1 | 0-5 | 0-13 | Ap | 89.2 | 6.4 | 4.4 | --- | --- | 3.6 | --- | --- |
| S02FL-121-004-2 | 5-13 | 13-33 | Bt1 | 53.1 | 4.4 | 42.5 | 1.33 | 21.7 | 19.0 | 0.04 | 0.034 |
| S02FL-121-004-3 | 13-17 | 33-44 | Bt2 | 49.2 | 3.5 | 47.3 | 1.24 | 33.5 | 21.0 | 0.16 | 0.068 |
| S02FL-121-004-4 | 17-22 | 44-57 | Bt3 | 54.3 | 4.1 | 41.6 | --- | --- | 18.1 | --- | --- |
| S02FL-121-004-5 | 22-51 | 57-129 | Btg1 | 57.1 | 3.6 | 39.3 | 1.45 | 26.0 | 15.7 | 0.15 | 0.071 |
| S02FL-121-004-6 | 51-63 | 129-160 | Btg2 | 55.3 | 4.1 | 40.6 | 1.39 | 30.8 | 17.6 | 0.18 | 0.082 |
| S02FL-121-004-7 | 63-80 | 160-200 | Btg 3 | 54.5 | 4.1 | 41.4 | 1.26 | 33.4 | 19.5 | 0.18 | 0.098 |
| Albany : |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-005-1 | 0-8 | 0-20 | Ap | 92.0 | 6.5 | 1.5 | 1.60 | 5.7 | 2.4 | 0.05 | --- |
| S02FL-121-005-2 | 8-19 | 20-47 | E | 91.0 | 7.6 | 1.4 | 1.69 | 3.7 | 1.0 | 0.05 | 0.002 |
| S02FL-121-005-3 | 19-27 | 47-69 | Eg1 | 90.9 | 8.4 | 0.7 | 1.64 | 2.1 | 0.6 | 0.02 | --- |
| S02FL-121-005-4 | 27-39 | 69-98 | Eg2 | 92.4 | 6.8 | 0.8 | 1.72 | 2.0 | 0.8 | 0.02 | 0.002 |
| S02FL-121-005-5 | 39-49 | 98-124 | Eg3 | 92.6 | 6.8 | 0.6 | 1.72 | 6.9 | 0.6 | 0.11 | 0.004 |
| S02FL-121-005-6 | 49-60 | 124-153 | Bt | 74.8 | 7.1 | 18.1 | 1.68 | 16.1 | 6.5 | 0.16 | 0.018 |
| S02FL-121-005-7 | 60-80 | 153-200 | Btg | 66.0 | 8.1 | 25.9 | 1.74 | 15.8 | 9.4 | 0.11 | 0.017 |
| Sapelo: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-006-1 | 0-10 | 0-25 | Ap | 92.7 | 6.5 | 0.8 | 1.51 | 6.5 | 2.4 | 0.06 | 0.002 |
| S02FL-121-006-2 | 10-22 | 25-56 | E | 94.9 | 4.7 | 0.4 | --- | --- | 0.9 | --- | --- |
| S02FL-121-006-3 | 22-23 | 56-59 | Bh1 | 91.1 | 7.7 | 1.2 | 1.53 | 15.5 | 4.0 | 0.18 | 0.002 |
| S02FL-121-006-4 | 23-28 | 59-70 | Bh2 | 90.3 | 8.4 | 1.3 | 1.53 | 12.5 | 2.6 | 0.15 | --- |
| S02FL-121-006-5 | 28-33 | 70-84 | E'1 | 91.9 | 8.1 | --- | 1.62 | 9.9 | 1.1 | 0.14 | --- |
| S02FL-121-006-6 | 33-43 | 84-109 | E'2 | 92.7 | 7.3 | --- | 1.70 | 6.9 | 0.7 | 0.11 | 0.002 |
| S02FL-121-006-7 | 43-54 | 109-137 | E'3 | 92.4 | 7.6 | --- | --- | --- | 0.9 | --- | --- |
| S02FL-121-006-8 | 54-74 | 137-188 | Btg1 | 73.4 | 9.6 | 17.0 | 1.69 | 16.0 | 6.2 | 0.17 | 0.016 |
| S02FL-121-006-9 | 74-80 | 188-200 | Btg2 | 87.1 | 4.7 | 8.2 | 1.70 | 10.5 | 3.3 | 0.12 | 0.008 |
| Blanton: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-007-1 | 0-5 | 0-13 | Ap | 93.0 | 5.7 | 1.3 | 1.42 | 11.0 | 3.1 | 0.11 | 0.007 |
| S02FL-121-007-2 | 5-13 | 13-34 | E1 | 91.1 | 7.8 | 1.1 | --- | --- | 1.3 | --- | --- |
| S02FL-121-007-3 | 13-27 | 34-68 | E2 | 93.6 | 5.9 | 0.5 | 1.54 | 9.2 | 0.8 | 0.13 | --- |
| S02FL-121-007-4 | 27-36 | 68-91 | E3 | 93.6 | 5.1 | 1.3 | 1.58 | 8.6 | 0.9 | 0.12 | 0.002 |
| S02FL-121-007-5 | 36-41 | 91-105 | E4 | 94.0 | 4.8 | 1.2 | 1.58 | 6.1 | 0.6 | 0.09 | --- |
| S02FL-121-007-6 | 41-48 | 105-122 | Bt1 | 81.0 | 5.2 | 13.8 | 1.71 | 12.9 | 4.9 | 0.14 | 0.019 |
| S02FL-121-007-7 | 48-67 | 122-169 | Bt2 | 70.7 | 2.5 | 26.8 | . 159 | 17.5 | 10.3 | 0.11 | 0.027 |
| S02FL-121-007-8 | 67-74 | 169-189 | Btg1 | 67.6 | 1.3 | 31.1 | 1.58 | 20.0 | 11.6 | 0.13 | 0.031 |
| S02FL-121-007-9 | 74-80 | 189-200 | Btg2 | 68.2 | 1.3 | 30.5 | 1.61 | 19.4 | 11.6 | 0.13 | 0.030 |

* See footnote at end of table.

Table 24.--Physical Analyses of Selected Soils-Continued

| Soil name and sample number* | Depth |  | Horizon\| | $\begin{aligned} & \text { Total } \\ & \text { sand } \\ & (2-0.05 \\ & \mathrm{mm}) \end{aligned}$ | $\begin{gathered} \text { Silt } \\ (0.05- \\ 0.002 \\ \mathrm{~mm}) \end{gathered}$ | $\begin{aligned} & \text { Clay } \\ & (<0.002 \\ & \mathrm{mm}) \end{aligned}$ | Bulk density 33 kPa | Water content 33 kPa | $\begin{array}{\|c} \text { Water } \\ \text { content } \\ 1,500 \\ \mathrm{kPa} \end{array}$ | WRD Whole soil | COLE <br> Whole <br> soil |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In | Cm |  | Pct | Pct | Pct |  |  |  |  |  |
| Foxworth: |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-008-1 | 0-11 | 0-28 | Ap | 95.8 | 2.3 | 1.9 | --- | --- | 1.8 | --- | --- |
| S02FL-121-008-2 | 11-35 | 28-89 | C1 | 95.0 | 3.3 | 1.7 | --- | --- | 1.4 | --- | --- |
| S02FL-121-008-3 | 35-46 | 89-117 | C2 | 95.3 | 2.8 | 1.9 | --- | --- | 1.1 | --- | --- |
| S02FL-121-008-4 | 46-54 | 117-137 | C3 | 95.7 | 2.6 | 1.7 | -- - | --- | 1.1 | -- - | --- |
| S02FL-121-008-5 | 54-62 | 137-158 | Cg1 | 96.2 | 2.1 | 1.7 | --- | --- | 1.0 | --- | --- |
| S02FL-121-008-6 | 62-67 | 158-170 | Cg 2 | 96.6 | 2.2 | 1.2 | --- | --- | 0.6 | --- | --- |
| S02FL-121-008-7 | 67-70 | 170-178 | Cg31 | 97.1 | 1.8 | 1.1 | --- | --- | 0.4 | --- | --- |
| S02FL-121-008-8 | 70-80 | 178-200 | Cg32 | 97.1 | 2.3 | 0.6 | -- - | --- | 0.4 | -- - | --- |

* Each of the soils is the typical pedon for the series in this survey area. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

Fable 25.--Chemical Analyses of Selected Soils
[See text for description of analysis methods]

| Soil name and sample number* | Depth |  | $\left\|\begin{array}{c} \text { Hori }-\mid \\ \text { zon } \end{array}\right\|$ | Ca | Mg | Na | K | Sum | Extr. AL | CEC |  | Base sat. | $\begin{gathered} \mathrm{pH} \\ 1: 1 \\ \mathrm{H}_{2} \mathrm{O} \end{gathered}$ | Extr. acid | $\begin{gathered} \text { Bray } \\ \text { P } \end{gathered}$ | Al | Est. \|organic C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | CEC-7 |  |  |  |  |  |  | \| ECEC |  |  |  |  |  |  |
|  | In | Cm |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alpin: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-001-1 | 0-6 | 0-15 | A | 0.2 | 0.1 | 0.1 | 0.1 | 0.5 | 0.5 | 2.1 | 1.0 | 17 | 4.9 | 2.5 | 21.8 | 50 | 0.78 |
| S02FL-121-001-2 | 6-20 | 15-51 | E1 | --- | 0.1 | 0.2 | 0.1 | 0.4 | --- | 0.6 | --- | 21 | 5.5 | 1.5 | 21.2 | --- | 0.23 |
| S02FL-121-001-3 | 20-32 | 51-81 | E21 | --- | --- | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 40 | 5.5 | 0.3 | 14.6 | 60 | 0.10 |
| S02FL-121-001-4 | 32-44 | 81-113 | E22 | --- | --- | 0.2 | 0.1 | 0.3 | --- | 0.3 | --- | 75 | 5.2 | 0.1 | 20.4 | -- - | 0.05 |
| S02FL-121-001-5 | 44-65 | 113-165 | E3 | --- | -- - | 0.2 | 0.1 | 0.3 | 0.2 | 0.2 | 0.5 | 75 | 4.9 | 0.1 | 19.6 | 40 | 0.03 |
| S02FL-121-001-6 | 65-80 | 165-200 | E/Bt | --- | 0.1 | 0.2 | 0.1 | 0.4 | --- | 0.2 | --- | 44 | 4.7 | 0.5 | 20.8 |  | 0.01 |
| Falmouth: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-002-1 | 0-3 | 0-8 | Ap | 1.9 | 0.5 | 0.2 | 0.1 | 2.7 | 0.3 | 4.2 | 3.0 | 38 | 4.1 | 4.4 | 7.4 | 10 | 3.53 |
| S02FL-121-002-2 | 3-10 | 8-25 | E | 0.5 | 0.1 | 0.2 | 0.1 | 0.9 | 0.4 | 2.0 | 1.3 | 29 | 4.4 | 2.2 | 2.1 | 31 | 0.53 |
| S02FL-121-002-3 | 10-17 | 25-43 | Bt1 | 6.1 | 1.2 | 0.2 | 0.2 | 7.7 | 1.9 | 12.3 | 9.6 | 51 | 4.7 | 7.4 | 0.3 | 20 | 0.43 |
| S02FL-121-002-4 | 17-30 | 43-76 | Bt2 | 8.6 | 1.5 | 0.2 | 0.2 | 10.5 | 1.9 | 17.6 | 12.4 | 52 | 4.7 | 9.6 | 0.1 | 15 | 0.35 |
| S02FL-121-002-5 | 30-43 | 76-109 | Btg1 | 7.5 | 0.9 | 0.2 | 0.2 | 8.8 | 2.9 | 13.4 | 11.7 | 56 | 4.6 | 6.9 | 0.3 | 25 | 0.29 |
| S02FL-121-002-6 | 43-65 | 109-165 | Btg2 | 22.5 | 1.5 | 0.3 | 0.4 | 24.7 | 1.6 | 32.1 | 26.3 | 78 | 5.6 | 7.1 | 0.4 | 6 | 0.08 |
| S02FL-121-002-7 | 65-80 | 165-200 | Cg | 25.8 | 1.5 | 0.3 | 0.4 | 28.0 | --- | 31.0 | --- | 84 | 5.4 | 5.2 | 0.4 | --- | 0.06 |
| Padlock: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-004-1 | 0-5 | 0-13 | Ap | 3.1 | 0.8 | 0.1 | 0.7 | 4.7 | 0.2 | 5.5 | 4.9 | 53 | 5.6 | 4.1 | 139.0 | 4 | 1.37 |
| S02FL-121-004-2 | 5-13 | 13-33 | Bt1 | 2.7 | 1.7 | 0.1 | 0.8 | 5.3 | 10.6 | 20.4 | 15.9 | 20 | 5.1 | 21.0 | 32.3 | 67 | 0.76 |
| S02FL-121-004-3 | 13-17 | 33-44 | Bt2 | 1.8 | 1.5 | 0.2 | 0.8 | 4.3 | 12.6 | 21.8 | 16.9 | 15 | 5.2 | 23.7 | 4.2 | 75 | 0.41 |
| S02FL-121-004-4 | 17-22 | 44-57 | Bt3 | 1.4 | 1.2 | 0.2 | 0.6 | 3.4 | 11.2 | 19.1 | 14.6 | 14 | 4.4 | 20.2 | 1.5 | 77 | 0.24 |
| S02FL-121-004-5 | 22-51 | 57-129 | Btg1 | 1.5 | 0.9 | 0.2 | 0.4 | 3.0 | 10.6 | 16.8 | 13.6 | 15 | 4.7 | 16.9 | 1.1 | 78 | 0.12 |
| S02FL-121-004-6 | 51-63 | 129-160 | Btg2 | 4.7 | 0.8 | 0.3 | 0.6 | 6.4 | 10.0 | 20.3 | 16.4 | 28 | 4.8 | 16.1 | 0.5 | 61 | 0.05 |
| S02FL-121-004-7 | 63-80 | 160-200 | Btg 3 | 7.0 | 1.0 | 0.3 | 0.7 | 9.0 | 10.9 | 24.5 | 19.9 | 32 | 4.8 | 19.3 | 9.1 | 55 | 0.04 |
| Albany: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-005-1 | 0-8 | 0-20 | Ap | 1.2 | 0.2 | 0.4 | 0.1 | 1.9 | --- | 2.4 | --- | 37 | 4.7 | 3.2 | 37.4 | --- | 0.88 |
| S02FL-121-005-2 | 8-19 | 20-47 | E | --- | --- | 0.2 | 0.1 | 0.3 | --- | 0.4 | --- | 23 | 4.8 | 1.0 | 37.6 | --- | 0.18 |
| S02FL-121-005-3 | 19-27 | 47-69 | Eg1 | --- | --- | 0.3 | 0.2 | 0.5 | --- | 0.2 | --- | 100 | 4.5 | --- | 14.1 | --- | 0.05 |
| S02FL-121-005-4 | 27-39 | 69-98 | Eg2 | --- | -- - | 0.2 | 0.1 | 0.3 | --- | 0.1 | --- | 100 | 4.7 | --- | 7.2 | --- | 0.03 |
| S02FL-121-005-5 | 39-49 | 98-124 | Eg3 | - | -- | 0.2 | 0.1 | 0.3 | -- | - | - | 100 | 5.0 | -- | 2.6 | -- | Trace |
| S02FL-121-005-6 | 49-60 | 124-153 | Bt | 0.7 | 0.6 | 0.3 | 0.2 | 1.8 | 1.0 | 3.5 | 2.8 | 31 | 5.0 | 4.0 | 5.3 | 36 | 0.11 |
| S02FL-121-005-7 | 60-80 | 153-200 | Btg | 0.3 | 0.2 | 0.2 | 0.2 | 0.9 | 2.5 | 4.4 | 3.4 | 16 | 5.1 | 4.9 | 1.1 | 74 | 0.06 |

* See footnote at end of table.

Table 25.--Chemical Analyses of Selected Soils--Continued


* Each of the soils is the typical pedon for the series in this survey area. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."
|rable 26.--Mineralogical Analyses of Selected Soils
[The clay minerals--smectite, the 14 -angstrom intergrade, kaolinite, quartz, and gibbsite--are expressed as a relative-amount class with values of 1 (smallest) to 5 (largest). The sand and silt minerals--quartz and total resistant minerals--are expressed as a percent]

| Soil name and sample number* | Depth |  | Horizon | Clay mineralogy |  |  |  |  | Sand-silt mineralogy |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Smectite | 14-angstrom intergrade | \|Kaolinite | Quartz | Gibbsite | Quartz | Total resistant |
|  | In | Cm |  |  |  |  |  |  |  | Pct | Pct |
| Alpin: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-001-3 | 20-32 | 51-81 | E21 | --- | --- | --- | --- | --- | 98 | 98 |
| S02FL-121-001-6 | 65-80 | 165-200 | E/Bt | 2 | 1 | 1 | 1 | --- | --- | --- |
| Falmouth: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-002-3 | 10-17 | 25-43 | Bt1 | 3 | 1 | -- | 1 | --- | --- | --- |
| S02FL-121-002-7 | 65-80 | 165-200 | Cg | 3 | 1 | 3 | - | --- | --- | --- |
| Padlock: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-004-2 | 5-13 | 13-33 | Bt1 | 1 | 1 | --- | 1 | --- | --- | --- |
| S02FL-121-004-3 | 13-17 | 33-44 | Bt2 | 2 | 1 | 2 | 1 | --- | -- | --- |
| S02FL-121-004-6 | 51-63 | 129-160 | Btg2 | 2 | 1 | 2 | 1 | --- | --- | --- |
| S02FL-121-004-7 | 63-80 | 160-200 | Btg 3 | 3 | 1 | 1 | 1 | --- | --- | --- |
| Albany : |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-005-3 | 19-27 | 47-69 | Eg1 | --- | --- | --- | --- | --- | 100 | 100 |
| S02FL-121-005-6 | 49-60 | 124-153 | Bt | --- | 1 | 3 | 1 | --- | --- | --- |
| Sapelo: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-006-3 | 22-23 | 56-59 | Bh1 | --- | --- | --- | --- | --- | 99 | 99 |
| S02FL-121-006-4 | 23-28 | 59-70 | Bh2 | --- | --- | --- | --- | --- | 100 | 100 |
| S02FL-121-006-6 | 33-43 | 84-109 | E'2 | --- | -- | -- | -- | --- | 99 | 99 |
| S02FL-121-006-7 | 43-54 | 109-137 | E'3 | --- | 1 | 1 | 1 | --- | --- | --- |
| Blanton: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-007-4 | 27-36 | 68-91 | E3 | --- | -- | --- | --- | --- | 99 | 99 |
| S02FL-121-007-7 | 48-67 | 122-169 | Bt2 | --- | 1 | 5 | - | 1 | --- | --- |
| Foxworth: |  |  |  |  |  |  |  |  |  |  |
| S02FL-121-008-2 | 11-35 | 28-89 | C1 | --- | --- | --- | --- | --- | 100 | 100 |

* Each of the soils is the typical pedon for the series in this survey area. For the location of the sample site, see the series description in the section "Soil Series and Their Morphology."

Table 27.--Taxonomic Classification of the Soils

| Soil name | Family or higher taxonomic class |
| :---: | :---: |
| Alaga | Thermic, coated Typic Quartzipsamments |
| Albany | Loamy, siliceous, subactive, thermic Grossarenic Paleudults |
| Alpin | Thermic, coated Lamellic Quartzipsamments |
| Aquents | Aquents |
| Bibb | Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents |
| Bigbee | Thermic, coated Typic Quartzipsamments |
| Blanton | Loamy, siliceous, semiactive, thermic Grossarenic Paleudults |
| Bonneau | Loamy, siliceous, subactive, thermic Arenic Paleudults |
| Boulogne | Sandy, siliceous, thermic Typic Alaquods |
| Cantey | Fine, kaolinitic, thermic Typic Albaquults |
| Chiefland | Loamy, siliceous, active, thermic Arenic Hapludalfs |
| Chipley | Thermic, coated Aquic Quartzipsamments |
| Clara | Siliceous, thermic Spodic Psammaquents |
| Eunola | Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults |
| Falmouth | Fine, smectitic, thermic Aquertic Chromic Hapludalfs |
| Fluvaquents | Fluvaquents |
| Foxwort | Thermic, coated Typic Quartzipsamments |
| Garcon | Loamy, siliceous, active, thermic Aquic Arenic Hapludults |
| Hurrican | Sandy, siliceous, thermic Oxyaquic Alorthods |
| Ichetucknee | Fine, mixed, active, thermic Albaquultic Hapludalfs |
| Leo | Sandy, siliceous, thermic Aeric Alaquods |
| Lynchburg- | Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults |
| Mascotte | Sandy over loamy, siliceous, active, thermic Ultic Alaquods |
| Meadowbrook | Loamy, siliceous, subactive, thermic Grossarenic Endoaqualfs |
| Meggett | Fine, mixed, active, thermic Typic Albaqualfs |
| Ocilla | Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults |
| Oluste | Sandy, siliceous, thermic Ultic Alaquods |
| Osier | Siliceous, thermic Typic Psammaquents |
| Otel | Loamy, siliceous, semiactive, thermic Grossarenic Paleudalfs |
| Ousley | Thermic, uncoated Aquic Quartzipsamments |
| Padlock | Fine, mixed, active, thermic Aquic Paleudults |
| Pamlico | Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists |
| Pantego | Fine-loamy, siliceous, semiactive, thermic Umbric Paleaquults |
| Pedro Variant | Loamy, siliceous, superactive, hyperthermic, shallow Typic Hapludalfs |
| Plumme | Loamy, siliceous, subactive, thermic Grossarenic Paleaquults |
| Pottsburg | Sandy, siliceous, thermic Grossarenic Alaquods |
| Sapel | Sandy, siliceous, thermic Ultic Alaquods |
| Surrency | Loamy, siliceous, semiactive, thermic Arenic Umbric Paleaquults |
| Troup | Loamy, kaolinitic, thermic Grossarenic Kandiudults |
| Udorthents | Udorthents |
| Wampee | Loamy, siliceous, active, thermic Aquic Arenic Hapludalfs |

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