United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
the U.S. Forest Service
and the Mississippi
Agricultural and Forestry
Experiment Station

Soil Survey of Jackson County, Mississippi

How To Use This Soil Survey

General Soil Map

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

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

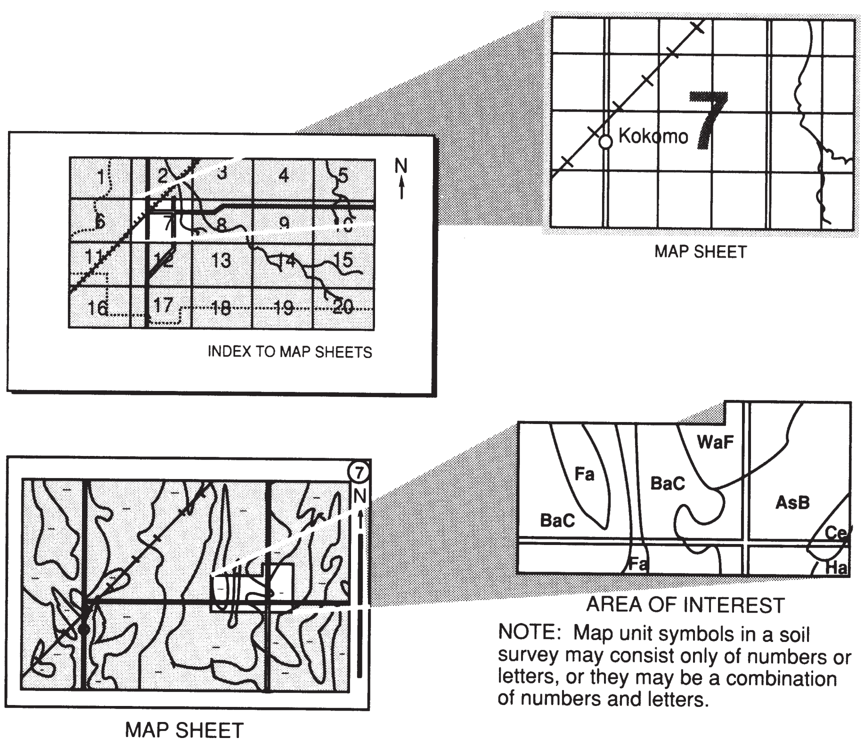
Detailed Soil Maps

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

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

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

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



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

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

Major fieldwork for this soil survey was completed in 1995. Soil names and descriptions were approved in 1996. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1995. This survey was made cooperatively by the Natural Resources Conservation Service, the U.S. Forest Service, and the Mississippi Agricultural and Forestry Experiment Station. The survey is part of the technical assistance furnished to the Jackson County, Mississippi, Soil and Water Conservation District. The Jackson County Board of Supervisors provided financial assistance for the survey.

Cover: Wetlands in the Pascagoula Bay area. Soils of the Handsboro, Axis, and Maurepas series are dominant in this area. Interstate Highway 10 is in the background.

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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Issued 2006

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. Broad areas of soils are shown on the general soil map. 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.

Homer L Wilkes

Homer L. Wilkes
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Jackson County, Mississippi

By Delaney B. Johnson, Natural Resources Conservation Service

Fieldwork by Delaney B. Johnson, Melvin Lee, William R. Johnson, Willie Terry, Jane Karinen, Greg Snell, and Wade Bott

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the U.S. Forest Service and the Mississippi Agricultural and Forestry Experiment Station

JACKSON COUNTY is in the southeastern corner of Mississippi (fig. 1). It consists of densely wooded lowlands and pine savannas. Within its borders are the offshore islands of Horn, Round, and Petit Bois. The county is bounded on the west by Harrison and Stone Counties, on the north by George County, and on the east by Mobile County, Alabama. Jackson County faces the Gulf of Mexico to the south. The total area of the county is about 744 square miles, or 484,200 acres.

The Pascagoula River, including the salt marsh and fresh water flood plain of the river, bisects the county from north to south. A smaller stream, the Escatawpa River,

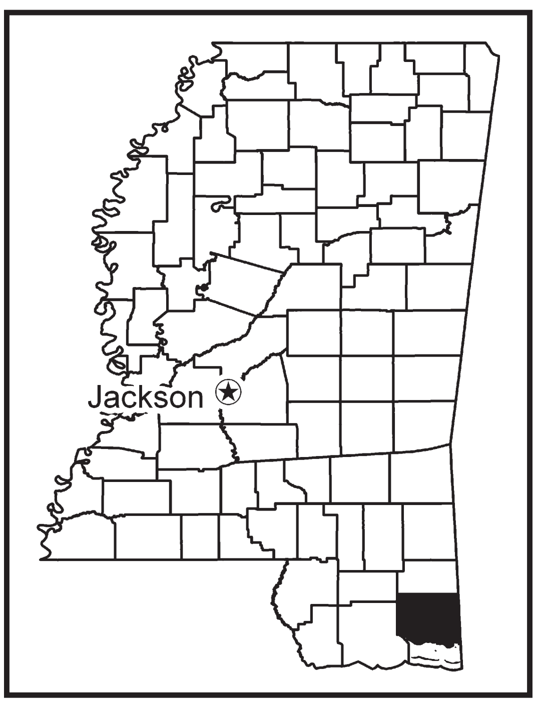

Figure 1.—Location of Jackson County in Mississippi.

flows south on the east side of the county to within 6 miles of the coast, where it turns west and joins the Pascagoula River. Jackson County marks the midpoint of a zone from Gulfport, Mississippi, to Mobile, Alabama. Harbor projects have been completed in Gulfport, Pascagoula, and Mobile, providing sufficient basin and channel depth for ship navigation. These channels also penetrate the extensive barrier island complex along the coastline. Tides in this area are diurnal, having one high and one low tide per day. The mean change in tidal range is 1 to 2 feet.

In 1990, the population of the county was about 115,243 (USDC, 1997). Pascagoula, the county seat, marks the north-central Mississippi Sound. It is the main trading center and had a population of 26,200 in 1990. Moss Point, which is the next largest town, had a population of 17,225. Other smaller trading centers where the fishing industry and smaller factories are located include Escatawpa, Gautier, and Ocean Springs. In addition to the fishing industry, the major industries are shipbuilding, oil refining, and paper manufacturing.

This survey updates the survey of Jackson County, Mississippi, published in 1964 (USDA, 1964).

General Nature of the County

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

History and Development

Jackson County was founded in 1812. The county's transition from Spanish to American rule was made in 1810 when the county was absorbed into the Mississippi Territory and brought under the constitution of the United States. In December 1812, Mobile County was divided into three counties: Mobile on the east, Jackson in the middle, and Hancock on the west. The northern row of townships was transferred from Jackson County to Greene County in 1822, and George County was created from the remaining townships in 1910.

In 1838, the leadership of Captain John Grant resulted in opening the Mississippi Sound to Mobile Bay with a channel called Grant's Pass. In 1840, his efforts resulted in the establishment of the Port of Pascagoula.

Shipbuilding was recorded as early as 1838 with Ebenezer Clark constructing flat-bottomed schooners for coastal trade. Clark's shipyard and other early shipyards were precursors to the State's largest employer, Ingalls. The prosperity of the county's timber and sawmill industry brought about an economic boom that lasted from 1880 to 1910. Pecan production was a big industry at the turn of the century. In more modern times, Jackson County continued to attract new industries. The Jackson County Board of Supervisors established the Bayou Casotte Industrial Park in 1954. Major industries, including Chevron USA, moved to the county in the early 1960s.

When the Jackson County Port Authority was organized in 1958, it was structured to attract industry to the county. Local monies were used to finance port development and to dredge the Pascagoula River and Bayou Casotte.

Geology

Frank A. Adams, geologist, Natural Resources Conservation Service, prepared this section.

Physiography.—Mississippi is almost entirely within the Gulf Coastal Plain Physiographic province of North America. The state has been subdivided into 12 topographic units (Holloman, 1994). Two of these units, the Southern Pine Hills and the Coastal Meadows, are represented in Jackson County.

The Southern Pine Hills unit occupies most of the land area in the southern half of Mississippi. In Jackson County, this unit is underlain primarily by sands and clays of Miocene and Pliocene age and gravels, sands, and clays of Pleistocene age.

The Coastal Meadows unit in Jackson County is in the lower third of the county. The unit is underlain by sands, gravels, clays, and silts of Holocene- and Pleistocene-age. Petit Bois Island, Round Island, and Horn Island are located 9 to 12 kilometers (6 to 8 miles) offshore and roughly parallel the Jackson County shoreline. They are narrow barrier islands consisting of Holocene sediments. These islands are continuously built by long shore currents and destroyed by storm wave action.

Topography.—The topography of the county ranges from hilly and moderately dissected uplands in the northwestern part of the county to flat to gently rolling terraces near the coast and along the rivers. The highest elevation is slightly over 61 meters (200 feet) in the extreme northwest corner of the county. Elevation decreases to sea level along the coastline.

Drainage.—The larger streams in the county flow through a nearly level flood plain, which ranges in width from 0.4 to more than 5 kilometers (1/4 to 3 miles). Stream terraces are generally only slightly higher than stream bottoms and may be subject to flooding. The central and western parts of Jackson County are drained mainly by the Pascagoula River and its tributaries and by Old Fort Bayou. The eastern part of the county is drained by the Escatawpa River. Minor streams drain other areas to the west and south.

Stratigraphy.—The stratigraphic units exposed in Jackson County are Miocene, Pliocene, Pleistocene, and Recent marine and continental sediments. These formations include, from oldest to youngest, the Pascagoula Formation, Graham Ferry Formation, Citronelle Formation, Terrace Deposits, Coastal Deposits, Alluvium, and Salt Marshes (Harvey, Golden, and Jeffery, 1965). Sediments crop out in bands across the county and present a general east-to-west structural strike. Average regional dip varies with formation and depth. Deeper formations have dips up to about 13 meters per kilometer (65 feet/mile) in the southern part of Jackson County with dip decreasing to the north. Outcrops and shallow horizons have dip to the south ranging from 1.6 meters per kilometer (8 feet/mile) in the Citronelle Formation to 3.8 meters per kilometer (19 feet/mile) in the Graham Ferry formation.

The oldest unit exposed in Jackson County is the Upper Miocene, Pascagoula Formation (delta, estuarine). The sediments of this formation typically consist of blue-green clays, shales, and silts with lesser amounts of sand and some gravel. The Pascagoula Formation ranges from 244 to over 366 meters in thickness (800 to 1,200 feet). This formation produced about 40 percent of the fresh water in southern Mississippi in the past but is relatively under developed along the Gulf Coast, except in the upper stratum. In Jackson County, the Pascagoula Formation contains fresh water to 520 meters (1,700 feet) and deep wells have artesian heads to 30 meters (100 feet) above sea level.

The Graham Ferry Formation, which is of Pliocene age, consists of silty clay, shale, silty sands, gravels, and gravelly sands in heterogeneous deltoid masses. The formation ranges from 33 to nearly 305 meters (110 to 1,000 feet) in thickness. It is the most intensively developed water-bearing formation in Jackson County and is a major source of water for Pascagoula and other communities. Although artesian pressures existed in the past, demand has resulted in an area-wide reduction of static water levels.

Miocene and Pliocene strata exposed in Jackson County are unconformably overlain by fluvial gravels, sands, and clays contained in the Citronelle Formation. The Citronelle Formation is identified as Pleistocene or Pliocene age. It is composed primarily of chert and quartz gravel, fine- to coarse-grained sands, and white clay. The formation is exposed mainly west of the Pascagoula River flood plain and forms most of the more rugged uplands. In Jackson County, the formation ranges from 0 to 49 meters (160 feet) in thickness. The lower part of the formation produces potable water for numerous small farm wells.

Terrace Deposits are fluvial gravels, sands, and clays of Pleistocene age. This unit has been divided into several subunits predominately by differences in elevation. This unit generally occurs at a lower elevation than the older Citronelle Formation and can typically be distinguished based on the elevation. The maximum thickness of this unit locally in Jackson County exceeds 25 meters (82 feet). Terrace Deposits are a minor source for water; some local wells produce from this aquifer.

Coastal Deposits are undifferentiated sediment sequences that include, from oldest to youngest, the Gulfport Formation, the Prairie Formation, and the Biloxi Formation. The sediments are typically unconsolidated tan and gray sands with some silts and clays that locally contain quartz and chert pebbles. The deposits are basically marine and near-coastal sediments deposited during transgressive-regressive continuance. The thickness of the Coastal Deposits ranges from 23 meters (75 feet) along the coast to 0 meters inland.

Alluvium occupies the flat areas of stream valleys in and adjacent to present stream courses. In Jackson County, the width of the flood plains ranges to over 3 miles along the Pascagoula River and to about 1/2 mile along the Escatawpa River. Recent alluvium consists of locally derived gravels, sands, and clays. Alluvium is commonly more than 15 meters (50 feet) thick in the larger stream valleys of southern Mississippi. Alluvium is not an important aquifer. High-volume wells may be possible in some local areas along major streams. Saltwater has intruded this aquifer along the Gulf Coast.

Salt marshes and wetlands occupy the lowest elevations in Jackson County, especially in the coastal area and along the lower reaches of the Pascagoula River system. Sediments are commonly organically rich silts, clays, and to a lesser extent, sands. The sediments may contain up to 70 percent plant remains. Salt marshes and wetlands are dynamic environments that are continually changing due to natural processes and human activities. They are currently recognized as an important and productive ecosystem that filters surface water, serves as habitat for wildlife, provides storage of floodwater, and affords recreational opportunities.

Mineral Resources.—Gravel and sand have been mined from the Citronelle Formation, Terrace Deposits, and Alluvium for building material, roadbeds and foundation material, and aggregate for cement (Minshew and others, 1973).

In the past, oyster shells were dredged from offshore areas and used as road aggregate, as fertilizer, and for other uses. Oyster shells are not currently mined in the county.

Hydrocarbons have yet to be produced in Jackson County. There is, however, a potential for production from the Miocene units, especially offshore, as production has been established in Mobile County, Alabama, to the east.

Climate

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

Temperature and precipitation data for the survey area were recorded at climate station Pascagoula 3 NE in Mississippi during the period 1948 to 2005. The thunderstorm days, relative humidity, percent sunshine, and wind information below are estimated from the first order station at Mobile, Alabama.

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

In winter, the average temperature is 52 degrees F and the average daily minimum temperature is 43 degrees. The lowest temperature on record, which occurred at Pascagoula on January 21, 1985, is 6 degrees. In summer, the average temperature is 81.0 degrees and the average daily maximum temperature is 89.0 degrees. The highest recorded temperature, which occurred at Pascagoula on July 16, 1980, is 104 degrees.

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

The average annual total precipitation is about 66 inches. Of this, about 51 inches, or 77 percent, usually falls in March through November. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 6.68 inches at Pascagoula, Mississippi, on September 29, 1998. Thunderstorms occur on about 80 days each year, and most occur in July.

Snowfall is extremely rare. During the period of record, the greatest snow depth at any one time was 1 inch recorded on February 12, 1958.

The average relative humidity in mid-afternoon is about 69 percent. Humidity is higher at night, and the average at dawn is about 88 percent. The sun shines 61 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the north. Average wind speed is highest, 10.4 miles per hour, in March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

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

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

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 improved knowledge of the soils, modifications in series concepts, and variations in the intensity of mapping or in the extent of the soils in the survey areas.

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General Soil Map Units

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

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

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

The boundaries of the general soil map units in Jackson County were matched, where possible, with those of the previously completed surveys of Mobile County, Alabama, and George, Harrison, and Stone Counties, Mississippi. In a few areas, however, the lines do not join and the names of the map units differ. These differences result mainly because of changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey area boundaries.

1. Atmore-Vancleave-Escambia

Dominantly nearly level and gently sloping, poorly drained, moderately well drained, and somewhat poorly drained soils that have a loamy or sandy surface layer and a loamy subsoil; on uplands

Setting

Location in the survey area: Southwestern part
Landscape: Coastal Plain
Landform: Marine terrace
Landform position: Atmore—flats, swales, and toeslopes; Vancleave—convex summits and side slopes; Escambia—flats and side slopes
Slope: 0 to 8 percent

Composition

Percent of the survey area: 16
Atmore soils: 41 percent
Vancleave soils: 29 percent
Escambia soils: 18 percent
Minor soils: 12 percent, including Bayou, Benndale, Croatan, Eustis, Hyde, Johnston, Poarch, and Saucier soils

Soil Characteristics

Atmore
Surface layer: Dark gray loam

Subsurface layer: Gray silt loam that has brownish yellow mottles
Subsoil: Upper part—gray loam that has brownish mottles and seams of grayish brown silt loam between peds; next part—gray loam that has nodular masses of plinthite and brownish and reddish mottles; next part—light olive gray clay loam that has reddish and brownish mottles; lower part—light olive gray sandy loam that has brownish mottles
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Perched, at the surface to a depth of 1.0 foot from December through April
Slope: 1 to 3 percent
Parent material: Loamy marine sediments

Vancleave
Surface layer: Very dark gray loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—light olive brown sandy loam; next part—brownish yellow sandy loam fragipan that has nodular masses of plinthite and brownish and grayish mottles; next part—light gray sandy clay loam that has grayish and brownish mottles; lower part—dark brown and brownish yellow fine sandy loam that has grayish mottles
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Perched, at a depth of 1.5 to 3.0 feet from December through April
Slope: 0 to 8 percent
Parent material: Loamy marine deposits

Escambia
Surface layer: Very dark gray very fine sandy loam
Subsoil: Upper part—light yellowish brown fine sandy loam and brownish yellow very fine sandy loam that has grayish and brownish mottles; next part—light yellowish brown and light brownish gray loam that has nodular masses of plinthite and brownish and grayish mottles; lower part—gray sandy clay loam that has nodular masses of plinthite and brownish and reddish mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Slope: 0 to 5 percent
Parent material: Loamy marine sediments

Minor soils
- The poorly drained Bayou soils on broad flats and in swales
- The well drained Benndale soils on high ridges
- The somewhat excessively drained Eustis soils on side slopes
- The very poorly drained Croatan, Hyde, and Johnston soils on flood plains
- The well drained Poarch soils on high ridges
- The moderately well drained Saucier soils on summits of ridges

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Atmore and Escambia—wetness and fertility; Vancleave—erodibility and fertility

Pasture and hayland
Management concerns: Atmore and Escambia—wetness and fertility; Vancleave—fertility

Woodland
Management concerns: Atmore and Escambia—restricted use of equipment, seedling survival, and competition from undesirable plants; Vancleave—competition from undesirable plants

Urban development
Management concerns: Wetness and restricted permeability

2. Eustis-Wadley-Benndale

Dominantly nearly level to strongly sloping, somewhat excessively drained soils that have a sandy surface layer and a sandy or loamy subsoil and well drained soils that have a loamy surface layer and a loamy subsoil; on uplands

Setting

Location in the survey area: Northeastern and south-central parts
Landscape: Coastal Plain
Landform: Ridges
Landform position: Summits, shoulder slopes, and side slopes
Slope: 0 to 17 percent

Composition

Percent of the survey area: 4
Eustis soils: 45 percent
Wadley soils: 18 percent
Benndale soils: 13 percent
Minor soils: 24 percent, including Boykin, Harleston, Malbis, Poarch, Ruston, Smithdale, and Smithton soils

Soil Characteristics

Eustis
Surface layer: Very dark grayish brown loamy sand
Subsurface layer: Dark yellowish brown, brown, and strong brown loamy fine sand
Subsoil: Upper part—yellowish red loamy sand; lower part—strong brown loamy sand that has reddish mottles
Substratum: Yellowish red fine sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 2 to 17 percent
Parent material: Sandy marine sediments

Wadley
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Upper part—yellowish brown and brownish yellow loamy sand; lower part—pale brown fine sand and brownish yellow loamy fine sand
Subsoil: Upper part—light yellowish brown sandy loam; next part—brownish yellow sandy clay loam that has grayish and reddish mottles and has nodular masses of plinthite; lower part—mottled brownish and grayish sandy clay loam that has nodular masses of plinthite

Depth class: Very deep
Drainage class: Somewhat excessively drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 0 to 5 percent
Parent material: Sandy and loamy marine sediments

Benndale
Surface layer: Dark grayish brown fine sandy loam
Subsoil: Upper part—light yellowish brown sandy loam; next part—yellowish brown loam; lower part—brownish yellow sandy clay loam and loam with reddish mottles
Substratum: Red sandy loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 0 to 12 percent
Parent material: Loamy marine or fluviomarine sediments

Minor soils
- The well drained Boykin and Smithdale soils on side slopes
- The moderately well drained Harleston soils on low terraces
- The well drained, loamy Malbis, Poarch, and Ruston soils on broad ridges
- The poorly drained Smithton soils on narrow flood plains

Use and Management

Major uses: Pasture, hayland, and cultivated crops

Cropland
Management concerns: Eustis and Wadley—restricted use of equipment, droughtiness, erodibility, and fertility; Benndale—erodibility and fertility

Pasture and hayland
Management concerns: Eustis and Wadley—droughtiness, fertility, and restricted use of equipment; Benndale—fertility

Woodland
Management concerns: Eustis and Wadley—restricted use of equipment and seedling survival; Benndale—competition from undesirable plants

Urban development
Management concerns: Eustis—slope in some places and droughtiness; Wadley—droughtiness; Benndale—slope in some places

3. Bama-Malbis-Eustis

Nearly level to strongly sloping, well drained soils that have a loamy surface layer and a loamy subsoil and somewhat excessively drained soils that have a sandy surface layer and a sandy subsoil; on uplands

Setting

Location in the survey area: Northeastern part
Landscape: Coastal Plain
Landform: Ridges
Landform position: Summits, shoulder slopes, and side slopes
Slope: 0 to 17 percent

Composition

Percent of the survey area: 2.5
Bama soils: 40 percent
Malbis soils: 29 percent
Eustis soils: 21 percent
Minor soils: 10 percent, including Benndale, Daleville, Jena, Nugent, Saucier, Smithton, and Vancleave soils

Soil Characteristics

Bama
Surface layer: Very dark grayish brown fine sandy loam
Subsurface layer: Yellowish brown fine sandy loam
Subsoil: Upper part—red and yellowish red sandy clay loam and loam; next part—red and yellowish red clay loam; lower part—brownish yellow loam that has reddish, brownish, and yellowish mottles
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 0 to 8 percent
Parent material: Loamy marine sediments

Malbis
Surface layer: Brown fine sandy loam
Subsoil: Upper part—light yellowish brown and yellowish brown loam; next part—yellowish brown and brownish yellow loam that has nodular masses of plinthite; lower part—brownish yellow and yellowish brown clay loam that has red and gray mottles and has nodular masses of plinthite
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 2.5 to 4.0 feet from December through April
Slope: 0 to 5 percent
Parent material: Loamy marine sediments

Eustis
Surface layer: Very dark grayish brown loamy sand
Subsurface layer: Dark yellowish brown, brown, and strong brown loamy fine sand
Subsoil: Upper part—yellowish red loamy sand; lower part—strong brown loamy sand that has reddish mottles
Substratum: Yellowish red fine sand
Depth class: Very deep
Drainage class: Somewhat excessively drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 2 to 17 percent
Parent material: Sandy marine sediments

Minor soils
- The well drained Benndale soils on summits and side slopes
- The poorly drained Daleville soils in swales and depressions
- The well drained Jena soils and excessively drained Nugent soils on narrow flood plains
- The moderately well drained Saucier soils on summits of ridges
- The poorly drained Smithton soils in swales and on flood plains
- The moderately well drained Vancleave soils on low ridges

Use and Management

Major uses: Woodland, pasture, and cropland

Cropland
Management concerns: Bama and Malbis—erodibility and fertility; Eustis—droughtiness, erodibility, and fertility

Pasture and hayland
Management concerns: Bama and Malbis—erodibility and fertility; Eustis—droughtiness, erodibility, and low fertility

Woodland
Management concerns: Bama and Malbis—competition from undesirable plants; Eustis—restricted use of equipment and seedling survival

Urban development
Management concerns: Bama—no significant limitations; Malbis—wetness and restricted permeability; Eustis—droughtiness and, in some places, slope

4. Poarch-Benndale-Escambia

Dominantly nearly level to strongly sloping, well drained and somewhat poorly drained soils that have a sandy surface layer and a loamy subsoil; on uplands

Setting

Location in the survey area: West-central part
Landscape: Coastal Plain
Landform: Ridges
Landform position: Summits, shoulder slopes, and side slopes
Slope: 0 to 12 percent

Composition

Percent of the survey area: 18
Poarch soils: 49 percent
Benndale soils: 25 percent
Escambia soils: 15 percent
Minor soils: 11 percent, including Croatan, Eustis, Johnston, Ruston, Smithton, Stough, Vancleave, and Wadley soils

Soil Characteristics

Poarch
Surface layer: Dark grayish brown fine sandy loam
Subsurface layer: Light yellowish brown fine sandy loam that has a few concretions of ironstone
Subsoil: Upper part—yellowish brown and brownish yellow sandy loam; next part—brownish yellow and light yellowish brown loam that has reddish, brownish, and grayish mottles and has nodular masses of plinthite; lower part—mottled grayish, brownish, and reddish loam
Substratum: Mottled brownish, grayish, and reddish loam that has strata of sandy loam and clay loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 2.5 to 5.0 feet from December through April
Slope: 2 to 5 percent
Parent material: Loamy marine sediments

Benndale
Surface layer: Dark grayish brown fine sandy loam
Subsoil: Upper part—light yellowish brown sandy loam; next part—yellowish brown loam; lower part—brownish yellow sandy clay loam and loam with reddish mottles
Substratum: Red sandy loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 0 to 12 percent
Parent material: Loamy marine or fluviomarine sediments

Escambia
Surface layer: Very dark gray very fine sandy loam
Subsoil: Upper part—light yellowish brown fine sandy loam and brownish yellow very fine sandy loam with grayish and brownish mottles; next part—light yellowish brown and light brownish gray loam that has nodular masses of plinthite and brownish and grayish mottles; lower part—gray sandy clay loam that has nodular masses of plinthite and brownish and reddish mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Slope: 0 to 5 percent
Parent material: Loamy marine sediments

Minor soils
- The very poorly drained Croatan and Johnston soils on flood plains
- The somewhat excessively drained, sandy Eustis and Wadley soils on summits and side slopes
- The well drained Ruston soils on broad summits
- The poorly drained Smithton soils in swales and on flood plains
- The somewhat poorly drained Stough soils on low terraces
- The moderately well drained Vancleave soils on summits and side slopes of low ridges

Use and Management

Major uses: Woodland, pasture, hayland, and urban land

Cropland
Management concerns: Poarch and Benndale—erodibility and fertility; Escambia—wetness, erodibility, and fertility

Pasture and hayland
Management concerns: Poarch and Benndale—fertility; Escambia—wetness and fertility

Woodland
Management concerns: Poarch and Benndale—competition from undesirable plants; Escambia—restricted use of equipment and competition from undesirable plants

Urban development
Management concerns: Poarch and Escambia—wetness and restricted permeability; Benndale—slope in some places

5. Bayou-Daleville-Lenoir

Dominantly level and nearly level, poorly drained soils that have a loamy surface layer and a loamy subsoil and somewhat poorly drained soils that have a loamy surface layer and a clayey subsoil; on terraces

Setting

Location in the survey area: Eastern part
Landscape: Coastal plain
Landform: Terraces
Landform position: Nearly level summits, flats, and swales
Slope: 0 to 1 percent

Composition

Percent of the survey area: 7
Bayou soils: 38 percent
Daleville soils: 26 percent
Lenoir soils: 20 percent
Minor soils: 16 percent, including Croatan, Harleston, Hyde, Johnston, Prentiss, Quitman, and Saucier soils

Soil Characteristics

Bayou
Surface layer: Dark gray sandy loam
Subsoil: Upper part—gray and light brownish gray sandy loam that has brownish mottles; next part—light brownish gray sandy clay loam that has brownish and yellowish mottles; lower part—light brownish gray clay loam that has brownish mottles
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Slope: 0 to 1 percent
Parent material: Loamy marine sediments

Daleville
Surface layer: Very dark gray silt loam
Subsurface layer: Gray silt loam
Subsoil: Upper part—gray loam that has brownish mottles; next part—gray and grayish brown clay loam that has reddish and brownish mottles; lower part—mottled grayish, reddish, and yellowish clay loam
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Slope: 0 to 1 percent
Parent material: Loamy sediments

Lenoir
Surface layer: Very dark gray silt loam
Subsurface layer: Light yellowish brown silt loam
Subsoil: Upper part—light brownish gray silty clay that has reddish and brownish mottles; next part—gray clay that has brownish and reddish mottles; lower part—light brownish gray clay loam that has reddish and brownish mottles
Substratum: Light olive gray sandy loam that has brownish mottles

Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Apparent, at a depth of 1.0 to 2.5 feet from December through April
Slope: 0 to 1 percent
Parent material: Clayey sediments

Minor soils
- The very poorly drained Croatan and Johnston soils on flood plains
- The moderately well drained Harleston and Prentiss soils and somewhat poorly drained Quitman soils on stream terraces
- The very poorly drained Hyde soils in depressions
- The moderately well drained Saucier soils on the slightly higher knolls and side slopes

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Wetness and fertility

Pasture and hayland
Management concerns: Wetness and fertility

Woodland
Management concerns: Bayou and Daleville—restricted use of equipment, seedling survival, and competition from undesirable plants; Lenoir—restricted use of equipment and competition from undesirable plants

Urban development
Management concerns: Bayou and Daleville—wetness; Lenoir—wetness, restricted permeability, and shrinking and swelling of the soil

6. Susquehanna-Freest-Smithdale

Dominantly gently sloping to strongly sloping, somewhat poorly drained, moderately well drained, and well drained soils that have a loamy surface layer and a clayey or loamy subsoil; on uplands

Setting

Location in the survey area: Northwestern part
Landscape: Coastal Plain
Landform: Ridges and hillslopes
Landform position: Susquehanna and Freest—summits and side slopes; Smithdale—side slopes
Slope: 1 to 17 percent

Composition

Percent of the survey area: 10
Susquehanna soils: 41 percent
Freest soils: 26 percent
Smithdale soils: 21 percent
Minor soils: 12 percent, including Atmore, Benndale, Jena, Malbis, Nugent, Poarch, Ruston, and Smithton soils

Soil Characteristics

Susquehanna

Surface layer: Dark grayish brown silt loam
Subsoil: Upper part—light brown and strong brown clay that has brownish, grayish, and reddish mottles; next part—mottled reddish, brownish, and grayish clay and silty clay; lower part—gray silty clay that has brownish and reddish mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 1 to 12 percent
Parent material: Clayey marine sediments

Freest

Surface layer: Dark grayish brown sandy loam
Subsurface layer: Brown sandy loam
Subsoil: Upper part—olive yellow loam; next part—yellowish brown sandy clay loam and clay loam with grayish and reddish mottles; lower part—yellowish brown silty clay that has brownish and grayish mottles
Substratum: Light brownish gray clay that has reddish and brownish mottles
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Slope: 1 to 8 percent
Parent material: Loamy and clayey marine sediments

Smithdale

Surface layer: Dark grayish brown fine sandy loam
Subsurface layer: Yellowish brown fine sandy loam
Subsoil: Upper part—red sandy clay loam; next part—yellowish red sandy loam; lower part—yellowish red sandy loam that has yellowish brown mottles
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 5 to 17 percent
Parent material: Loamy marine sediments

Minor soils

- The poorly drained Atmore soils in depressions and on toeslopes
- The well drained, loamy Benndale, Malbis, Poarch, and Ruston soils on summits and on upper parts of slopes
- The well drained Jena and excessively drained Nugent soils on narrow flood plains
- The poorly drained Smithton soils in swales and on flood plains

Use and Management

Major uses: Woodland and wildlife habitat

Cropland

Management concerns: Erodibility and fertility

Pasture and hayland

Management concerns: Erodibility and fertility

Woodland

Management concerns: Susquehanna and Freest—restricted use of equipment and competition from undesirable plants; Smithdale—competition from undesirable plants

Urban development

Management concerns: Susquehanna and Freest—restricted permeability, shrinking and swelling of the soil, low strength, and wetness; Smithdale—slope

7. Kinston-Chastain-Mantachie

Dominantly level and nearly level, poorly drained and somewhat poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil; on flood plains

Setting

Location in the survey area: North-central and northeastern parts
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Kinston and Chastain—backswamps; Mantachie—slightly convex, natural levees
Slope: 0 to 1 percent

Composition

Percent of the survey area: 10
Kinston soils: 34 percent
Chastain soils: 34 percent
Mantachie soils: 17 percent
Minor soils: 15 percent, including Arat, Bigbee, Columbus, Jena, Latonia, Myatt, and Nugent soils

Soil Characteristics

Kinston

Surface layer: Dark brown fine sandy loam
Subsoil: Upper part—grayish brown loam that has brownish mottles; next part—light brownish gray sandy clay loam that has brownish mottles; lower part—gray loam that has brownish and reddish mottles
Substratum: Mottled grayish and brownish loam and gray sandy loam
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through June
Slope: 0 to 1 percent
Parent material: Stratified loamy and sandy alluvium

Chastain

Surface layer: Dark yellowish brown clay loam
Subsoil: Upper part—dark gray and gray silty clay and grayish brown clay with brownish mottles; next part—light brownish gray silty clay loam and silty clay with brownish mottles; lower part—grayish brown silty clay loam that has reddish mottles
Substratum: Grayish brown loamy sand that has reddish mottles
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through June
Slope: 0 to 1 percent
Parent material: Clayey alluvium

Mantachie

Surface layer: Dark brown and brown fine sandy loam

Subsoil: Upper part—brown and light brownish gray loam that has brownish mottles; next part—light brownish gray sandy clay loam that has reddish mottles; lower part—light brownish gray clay loam that has reddish mottles
Substratum: Light brownish gray sandy clay loam that has reddish mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Apparent, at a depth of 1.0 to 1.5 feet from December through June
Slope: 0 to 1 percent
Parent material: Loamy alluvium

Minor soils
- The very poorly drained Arat soils in sloughs and other depressions
- The excessively drained Bigbee soils on high parts of natural levees and on low terraces
- The moderately well drained Columbus soils and well drained Latonia soils on low terraces
- The well drained Jena soils and excessively drained Nugent soils on high parts of natural levees
- The poorly drained Myatt soils on low terraces

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Wetness and flooding

Pasture and hayland
Management concerns: Wetness and flooding

Woodland
Management concerns: Restricted use of equipment, seedling survival, and competition from undesirable plants

Urban development
Management concerns: Wetness and flooding

8. Handsboro-Axis-Maurepas

Dominantly level, very poorly drained soils that have a surface layer of mucky silt loam, mucky sandy clay loam, or muck and a substratum of muck or a loamy substratum; in tidal marshes, coastal flood plains, and swamps

Setting

Location in the survey area: Southern part
Landscape: Coastal Plain
Landform: Coastal marshes and flood plains (fig. 2)
Landform position: Handsboro and Axis—tidal salt marshes; Maurepas—backswamps
Slope: 0 to 1 percent

Composition

Percent of the survey area: 14
Handsboro soils: 40 percent
Axis soils: 39 percent

Figure 2.—An area of general soil map unit 8, Handsboro-Axis-Maurepas, adjacent to Pascagoula Bay. Areas of this map unit cover almost 68,000 acres in the southern part of the county. These areas serve primarily as wetland wildlife habitat.

Maurepas soils: 14 percent
Minor soils: 7 percent, including Bayou, Duckston, Harleston, Hyde, Lenoir, and Quitman soils

Soil Characteristics

Handsboro

Surface layer: Olive gray mucky silt loam
Substratum: Upper part—dark olive gray muck that has a few thin strata of sandy loam; lower part—very dark gray and very dark grayish brown sandy loam
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, from 1.0 foot above the surface to a depth of 0.5 foot from January through December
Slope: 0 to 1 percent
Parent material: Thick accumulations of herbaceous plant remains and the underlying mineral sediments

Axis

Surface layer: Very dark gray mucky sandy clay loam
Substratum: Upper part—olive gray and gray sandy loam; next part—greenish gray sandy loam and dark greenish gray loam; lower part—light brownish gray sandy loam
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from January through December
Slope: 0 to 1 percent
Parent material: Loamy marine sediments

Maurepas
Surface tier: Very dark grayish brown muck
Subsurface tier: Dark reddish brown muck
Bottom tier: Very dark grayish brown muck
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, from 1.0 foot above the surface to a depth of 0.5 foot from January through December
Slope: 0 to 1 percent
Parent material: Woody plant remains

Minor soils
- The poorly drained, loamy Bayou soils on low terraces
- The poorly drained, sandy Duckston soils in swales
- The moderately well drained, loamy Harleston soils on low terraces
- The very poorly drained, loamy Hyde soils on low terraces
- The somewhat poorly drained, loamy Quitman soils on low terraces
- The somewhat poorly drained, clayey Lenoir soils on low terraces

Use and Management

Major uses: Wildlife habitat

Cropland
Management concerns: Wetness and flooding

Pasture and hayland
Management concerns: Wetness and flooding

Woodland
Management concerns: Restricted use of equipment and seedling survival

Urban development
Management concerns: Wetness, flooding, and low strength

9. Nugent-Jena-Columbus

Dominantly level and nearly level, excessively drained soils that have a sandy surface layer and a sandy substratum and well drained and moderately well drained soils that have a loamy surface layer and a loamy subsoil; on flood plains and low terraces

Setting

Location in the survey area: Eastern and central parts
Landscape: Coastal Plain
Landform: Nugent and Jena—flood plains; Columbus—low stream terraces
Landform position: Nugent and Jena—natural levees; Columbus—nearly level summits
Slope: 0 to 2 percent

Composition

Percent of the survey area: 1.5
Nugent soils: 36 percent
Jena soils: 30 percent
Columbus soils: 22 percent
Minor soils: 12 percent, including Bigbee, Latonia, Prentiss, Smithton, and Stough soils

Soil Characteristics

Nugent
Surface layer: Brown loamy sand
Substratum: Upper part—brown and pale brown loamy sand; next part—brown fine sandy loam; lower part—pale brown sand
Depth class: Very deep
Drainage class: Excessively drained
Seasonal high water table: Apparent, at a depth of 3.5 to 6.0 feet from December through April
Slope: 0 to 2 percent
Parent material: Sandy alluvium

Jena
Surface layer: Brown fine sandy loam
Subsoil: Upper part—dark brown fine sandy loam; lower part—pale brown sandy loam
Substratum: Light yellowish brown loamy fine sand
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Apparent, at a depth of 3.5 to 6.0 feet from December through April
Slope: 0 to 2 percent
Parent material: Loamy alluvium

Columbus
Surface layer: Brown loam
Subsurface layer: Yellowish brown loam
Subsoil: Upper part—dark yellowish brown loam that has grayish and brownish mottles; next part—yellowish brown loam that has brownish, grayish, and reddish mottles; lower part—yellowish brown loam that has grayish and brownish mottles
Substratum: Upper part—strong brown sandy loam that has grayish and brownish mottles; lower part—light gray loamy sand and sand
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Slope: 0 to 2 percent
Parent material: Loamy fluvial sediments

Minor soils
- The excessively drained Bigbee soils on high parts of natural levees and on terraces
- The well drained Latonia soils and moderately well drained Prentiss soils on terraces
- The poorly drained Smithton soils in swales on low terraces
- The somewhat poorly drained Stough soils on low terraces

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Flooding

Pasture and hayland
Management concerns: Flooding

Woodland
Management concerns: Nugent and Jena—restricted use of equipment, seedling

survival, and competition from undesirable plants; Columbus—restricted use of equipment and competition from undesirable plants

Urban development
Management concerns: Nugent and Jena—flooding; Columbus—flooding, wetness, and restricted permeability

10. Harleston-Escambia-Bayou

Dominantly nearly level to moderately sloping, moderately well drained, somewhat poorly drained, and poorly drained soils that have a loamy surface layer and a loamy subsoil; on uplands

Setting

Location in the survey area: Southern part
Landscape: Coastal Plain
Landform: Terraces
Landform position: Harleston and Escambia—summits and side slopes; Bayou—flats and swales
Slope: 0 to 8 percent

Composition

Percent of the survey area: 14
Harleston soils: 35 percent
Escambia soils: 30 percent
Bayou soils: 15 percent
Minor soils: 20 percent, including Johns, Latonia, Ocilla, Quitman, and Wadley soils

Soil Characteristics

Harleston
Surface layer: Very dark grayish brown fine sandy loam
Subsurface layer: Pale brown sandy loam
Subsoil: Upper part—light yellowish brown sandy loam; next part—yellowish brown loam and sandy clay loam with brownish, grayish, and reddish mottles; lower part—mottled reddish, grayish, and brownish sandy clay loam
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Slope: 0 to 8 percent
Parent material: Loamy sediments

Escambia
Surface layer: Very dark gray very fine sandy loam
Subsoil: Upper part—light yellowish brown fine sandy loam and brownish yellow very fine sandy loam with grayish and brownish mottles; next part—light yellowish brown and light brownish gray loam that has nodular masses of plinthite and brownish and grayish mottles; lower part—gray sandy clay loam that has nodular masses of plinthite and brownish and reddish mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April

Slope: 0 to 5 percent
Parent material: Loamy marine sediments

Bayou soils
Surface layer: Dark gray sandy loam
Subsoil: Upper part—gray and light brownish gray sandy loam that has brownish mottles; next part—light brownish gray sandy clay loam that has brownish and yellowish mottles; lower part—light brownish gray clay loam that has brownish mottles
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Slope: 0 to 1 percent
Parent material: Loamy marine sediments

Minor soils
- The somewhat poorly drained, loamy Johns and Quitman soils on low terraces
- The moderately well drained Latonia soils on low terraces
- The somewhat poorly drained, sandy Ocilla soils on low terraces
- The somewhat excessively drained Wadley soils on summits and side slopes

Use and Management

Major uses: Woodland, wildlife habitat, and urban land

Cropland
Management concerns: Harleston—erodibility and fertility; Escambia and Bayou—wetness and fertility

Pasture and hayland
Management concerns: Harleston—fertility; Escambia and Bayou—wetness and fertility

Woodland
Management concerns: Harleston—competition from undesirable plants; Escambia and Bayou—restricted use of equipment, seedling survival, and competition from undesirable plants

Urban development
Management concerns: Harleston—wetness; Escambia and Bayou—wetness, restricted permeability, and low strength

11. Hyde-Croatan-Johnston

Dominantly level and nearly level, very poorly drained soils that have a loamy or mucky surface layer and a loamy subsoil or substratum; on flood plains and low terraces

Setting

Location in the survey area: Eastern part
Landscape: Coastal Plain
Landform: Flood plains and terraces
Landform position: Hyde—flats and depressions on low terraces; Croatan and Johnston—backswamps, sloughs, and other depressions on flood plains
Slope: 0 to 1 percent

Composition

Percent of the survey area: 2
Hyde soils: 40 percent
Croatan soils: 30 percent
Johnston soils: 20 percent
Minor soils: 10 percent, including Daleville, Quitman, and Smithton soils

Soil Characteristics

Hyde
Surface layer: Black silt loam
Subsoil: Upper part—dark grayish brown silty clay loam; next part—grayish brown and gray silty clay loam that has brownish mottles; lower part—gray clay loam
Substratum: Stratified gray clay loam and sandy loam
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.5 feet from December through May
Slope: 0 to 1 percent
Parent material: Loamy sediments

Croatan
Surface layer: Black muck
Subsurface layer: Dark grayish brown fine sandy loam that has brownish mottles
Substratum: Grayish brown clay loam that has brownish and reddish mottles
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from November through May
Slope: 0 to 1 percent
Parent material: Herbaceous organic material and underlying loamy sediments

Johnston
Surface layer: Black mucky loam
Substratum: Upper part—gray sandy loam; lower part—light gray sand
Depth class: Very deep
Drainage class: Very poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from November through May
Slope: 0 to 1 percent
Parent material: Loamy alluvium

Minor soils
- The poorly drained, loamy Daleville soils on terraces
- The somewhat poorly drained, loamy Quitman soils on terraces
- The poorly drained, loamy Smithton soils in swales and on flats on low terraces

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Wetness and flooding

Pasture and hayland
Management concerns: Wetness and flooding

Woodland
Management concerns: Restricted use of equipment, seedling survival, and competition from undesirable plants

Urban development
Management concerns: Wetness and flooding

12. Duckston-Newhan-Corolla

Dominantly nearly level to rolling, poorly drained, excessively drained, and somewhat poorly drained soils that are sandy throughout; on barrier islands

Setting

Location in the survey area: Coastal islands
Landscape: Coastal Plain
Landform: Barrier islands
Landform position: Duckston—flats and interdunal depressions and swales; Newhan—dunes; Corolla—lower parts of dunes and interdunal swales
Slope: 0 to 20 percent

Composition

Percent of the survey area: 1
Duckston soils: 35 percent
Newhan soils: 31 percent
Corolla soils: 26 percent
Minor soils: 8 percent, including Axis and Handsboro soils and areas of beaches

Soil Characteristics

Duckston
Surface layer: Very dark gray sand
Substratum: Gray and light gray fine sand
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 0.5 foot from January through December
Slope: 0 to 2 percent
Parent material: Sandy marine sediments

Newhan
Surface layer: Dark grayish brown fine sand
Substratum: Upper part—light brownish gray fine sand; next part—light brownish gray sand; lower part—gray sand
Depth class: Very deep
Drainage class: Excessively drained
Seasonal high water table: At a depth of more than 6.0 feet
Slope: 5 to 20 percent
Parent material: Eolian sand

Corolla
Surface layer: Grayish brown fine sand
Substratum: Upper part—light olive brown fine sand; next part—grayish brown and light brownish gray fine sand; lower part—gray fine sand
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 1.5 to 3.0 feet from January through December
Slope: 0 to 6 percent
Parent material: Sandy marine sediments and eolian sand

Minor soils

- The very poorly drained, loamy Axis soils in tidal marshes
- The very poorly drained, mucky Handsboro soils in tidal marshes
- Areas of sandy beaches bordering the Gulf of Mexico

Use and Management

Major uses: Wildlife habitat and recreation

Cropland

Management concerns: Duckston—wetness, fertility, and the effects of salt spray; Newhan and Corolla—complex slopes, erodibility, droughtiness, restricted use of equipment, and the effects of salt spray

Pasture and hayland

Management concerns: Duckston—wetness, fertility, and the effects of salt spray; Newhan and Corolla—droughtiness, restricted use of equipment, and the effects of salt spray

Woodland

Management concerns: Restricted use of equipment and seedling survival

Urban development

Management concerns: Flooding

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, Escambia very fine sandy loam, 2 to 5 percent slopes, is a phase of the Escambia 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. Susquehanna-Freest complex, 1 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. Kinston, Chastain, and Mantachie soils, frequently flooded, is an undifferentiated group in this survey area.

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

Table 4 gives the acreage and proportionate extent of each map unit. 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—Kinston, Chastain, and Mantachie soils, frequently flooded

Setting

Landform: Flood plains
Landform position: Kinston and Chastain—backswamps; Mantachie—low parts of natural levees
Shape of areas: Long and narrow
Size of areas: 100 to 300 acres

Composition

Kinston and similar soils: 40 percent
Chastain and similar soils: 30 percent
Mantachie and similar soils: 20 percent
Dissimilar soils: 10 percent

Typical Profile

Kinston

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

Subsoil:
6 to 12 inches—grayish brown loam that has strong brown mottles
12 to 31 inches—light brownish gray sandy clay loam that has yellowish brown and strong brown mottles
31 to 56 inches—gray loam that has strong brown and yellowish red mottles

Substratum:
56 to 59 inches—multicolored gray, yellowish brown, and strong brown loam
59 to 86 inches—gray sandy loam

Chastain

Surface layer:
0 to 2 inches—dark yellowish brown clay loam that has dark gray mottles

Subsoil:
2 to 17 inches—dark gray and gray silty clay that has brown mottles
17 to 23 inches—grayish brown clay that has gray, yellowish brown, and brownish yellow mottles
23 to 35 inches—light brownish gray silty clay loam that has yellowish brown and dark yellowish brown mottles
35 to 46 inches—light brownish gray silty clay that has yellowish brown mottles
46 to 55 inches—grayish brown silty clay loam that has red mottles

Substratum:
55 to 74 inches—grayish brown loamy sand that has red mottles

Mantachie

Surface layer:
0 to 9 inches—dark brown and brown fine sandy loam that has light brownish gray mottles

Subsoil:
9 to 19 inches—brown loam that has light brownish gray and yellowish brown mottles
19 to 30 inches—light brownish gray loam that has light yellowish brown mottles
30 to 45 inches—light brownish gray sandy clay loam that has yellowish red mottles
45 to 53 inches—light brownish gray clay loam that has yellowish red mottles

Substratum:
53 to 70 inches—light brownish gray sandy clay loam that has yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Kinston and Chastain—poorly drained; Mantachie—somewhat poorly drained
Permeability: Kinston and Mantachie—moderate; Chastain—slow
Available water capacity: High
Seasonal high water table: Kinston and Chastain—apparent, at the surface to a depth of 1 foot from December through June; Mantachie—apparent, at a depth of 1.0 to 1.5 feet from December through April
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of very poorly drained Arat soils in slightly lower positions than those of the Kinston and Chastain soils
- Areas of very poorly drained Croatan soils that have thick organic layers in the upper part; in deep swales
- Areas of well drained Jena soils on high parts of natural levees

Similar soils:
- Scattered areas of poorly drained soils that have a subsoil with less clay than the subsoil of the Kinston soil

Land Use

Dominant uses: Woodland and wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Poorly suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- The best method for reforesting areas of these soils is by managing for natural regeneration of hardwoods.
- Using low-pressure ground equipment helps to control rutting and the root damage caused by compaction.
- Harvesting timber during the summer and fall reduces the risk of damage from the flooding.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife and wetland wildlife—fair
Management concerns: Equipment use, ponding, and flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers and by creating openings in the canopy. The openings encourage the growth of seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the flooding, ponding, and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: Kinston—6w; Chastain—7w; Mantachie—5w

3—Atmore loam, 1 to 3 percent slopes

Setting

Landform: Marine terraces
Landform position: Flats, swales, and toeslopes

Shape of areas: Oblong
Size of areas: 5 to 50 acres

Composition

Atmore and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 4 inches—dark gray loam

Subsurface layer:
4 to 14 inches—gray silt loam that has brownish yellow mottles

Subsoil:
14 to 35 inches—gray loam and grayish brown silt loam with yellowish brown mottles
35 to 48 inches—gray loam that has yellowish brown and red mottles and has masses of nodular plinthite
48 to 58 inches—multicolored gray, reddish yellow, yellowish brown, and light brownish gray loam that has masses of nodular plinthite
58 to 71 inches—light olive gray clay loam that has yellowish red and brownish yellow mottles

Substratum:
71 to 81 inches—light olive gray sandy loam that has yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: Medium
Seasonal high water table: Perched, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of Atmore soils that are ponded for long or very long periods; in deep depressions
- Areas of well drained Benndale soils on convex knolls
- Areas of somewhat poorly drained Escambia soils on convex parts of slopes
- Areas of very poorly drained Johnston soils in drainageways
- Areas of moderately well drained Saucier and Vancleave soils on low knolls and convex parts of slopes

Similar soils:
- Scattered areas of poorly drained soils that do not have significant accumulations of plinthite in the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited

Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants (fig. 3)
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment also minimizes rutting and the damage caused to tree roots by compaction.

Figure 3.—An area of Atmore loam, 1 to 3 percent slopes. This poorly drained soil is very low in natural fertility as evidenced by the spindly slash pine trees and the abundance of carnivorus plants, such as the yellow pitcher plant *(Sarracenia flava L.).*

- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat

Potential to support habitat for: Openland wildlife—fair; woodland wildlife—poor; wetland wildlife—good

Management concerns: Equipment use and wetness

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Wetness

Management measures and considerations:

- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields

Suitability: Unsuited

Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of restricted permeability and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

4—Lenoir silt loam, 0 to 1 percent slopes

Setting

Landform: Stream and marine terraces

Landform position: Flat and slightly concave slopes

Shape of areas: Irregular

Size of areas: 20 to 300 acres

Composition

Lenoir and similar soils: 85 percent

Dissimilar soils: 15 percent

Typical Profile

Surface layer:

0 to 6 inches—very dark gray silt loam that has dark yellowish brown mottles

Subsurface layer:

6 to 13 inches—light yellowish brown silt loam that has yellowish brown, pale brown, and dark grayish brown mottles

Subsoil:
13 to 25 inches—light brownish gray silty clay that has red and brownish yellow mottles
25 to 50 inches—gray clay that has brownish yellow, dark yellowish brown, and yellowish red mottles
50 to 62 inches—light brownish gray clay loam that has red and yellowish brown mottles

Substratum:
62 to 79 inches—light olive gray sandy loam that has light brownish gray mottles
79 to 84 inches—light olive gray sandy loam that has strong brown mottles and thin strata of strong brown sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 1.0 to 2.5 feet from December through April
Shrink-swell potential: Moderate
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of moderately well drained, loamy Columbus and Harleston soils on convex knolls
- Areas of poorly drained Daleville soils in shallow depressions
- Areas of very poorly drained Hyde soils in sloughs
- Areas of loamy Quitman soils in positions similar to those of the Lenoir soil
- Areas of very poorly drained Johnston soils in drainageways

Similar soils:
- Scattered areas of somewhat poorly drained and poorly drained soils that have a thick, dark-colored surface layer

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass

Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- An artificial drainage system may be needed to maximize productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness and shrink-swell potential
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.
- Reinforcing foundations and footings or backfilling with coarse-textured material prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3w

5—Benndale fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Ridges
Landform position: Summits
Shape of areas: Irregular
Size of areas: 10 to more than 100 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
6 to 18 inches—light yellowish brown sandy loam
18 to 44 inches—yellowish brown loam
44 to 61 inches—brownish yellow sandy clay loam that has red mottles
61 to 74 inches—brownish yellow loam and sandy clay loam with red mottles

Substratum:
74 to 81 inches—red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama soils, which have a reddish subsoil, in positions similar to those of the Benndale soils
- Areas of sandy Eustis soils on high knolls
- Areas of Malbis soils, which have a subsoil that has more clay than the subsoil of the Benndale soil, in positions similar to those of the Benndale soils
- Areas of poorly drained Smithton soils in swales and drainageways

Similar soils:
- Scattered areas of Poarch soils, which have a significant accumulation of plinthite in the subsoil

Land Use

Dominant uses: Cropland and pasture
Other uses: Woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Droughtiness and fertility

Management measures and considerations:
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase the amount of available water, decrease the extent of crusting, and improve the fertility of the soil.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited (fig. 4)
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor

Figure 4.—An area of Benndale fine sandy loam, 0 to 2 percent slopes. This soil is well suited to pasture, hay, and cultivated crops.

Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Interpretive Group

Land capability classification: 2s

6—Benndale fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Shoulder slopes and side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
6 to 18 inches—light yellowish brown sandy loam
18 to 44 inches—yellowish brown loam
44 to 61 inches—brownish yellow sandy clay loam that has red mottles
61 to 74 inches—brownish yellow loam and sandy clay loam with red mottles

Substratum:
74 to 81 inches—red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low

Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama soils, which have a reddish subsoil, in positions similar to those of the Benndale soils
- Areas of sandy Eustis and Wadley soils on the lower parts of slopes
- Areas of very poorly drained Johnston soils in drainageways

Similar soils:
- Scattered areas of Poarch soils, which have a significant accumulation of plinthite in the subsoil
- Scattered areas of well drained, loamy soils that have a subsoil with less clay in the lower part than the subsoil of the Benndale soil

Land Use

Dominant uses: Cropland and pasture
Other uses: Hayland and woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor

Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Interpretive Group

Land capability classification: 2e

8—Latonia loamy sand, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Stream terraces
Landform position: Flat and slightly convex slopes
Shape of areas: Irregular
Size of areas: 20 to 50 acres

Composition

Latonia and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loamy sand

Subsurface layer:
6 to 13 inches—yellowish brown sandy loam

Subsoil:
13 to 33 inches—yellowish brown sandy loam
33 to 44 inches—brownish yellow fine sandy loam

Substratum:
44 to 51 inches—brownish yellow loamy sand that has very pale brown and yellowish red mottles
51 to 54 inches—very pale brown loamy fine sand that has yellowish brown mottles
54 to 80 inches—white loamy fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderately rapid
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of sandy Bigbee soils on knolls
- Areas of moderately well drained Columbus and Harleston soils in positions that are slightly lower and less convex than those of the Latonia soil
- Areas of poorly drained Myatt soils in swales
- Areas of somewhat poorly drained, sandy Ocilla soils in swales

Similar soils:
- Scattered areas of Latonia soils that have a surface layer of sandy loam
- Scattered areas of well drained, loamy soils that have reddish colors in the upper part of the subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, and grain sorghum
Management concerns: Flooding, droughtiness, and fertility
Management measures and considerations:
- This map unit is difficult to manage for crop production because of the hazard of flooding during the growing season.
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase available water capacity, minimize crusting, and improve fertility.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Flooding, droughtiness, and fertility
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, livestock and hay crops can be damaged during any time of the year.
- Using supplemental irrigation and seeding species that are adapted to droughty conditions increase production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor

Management concerns: Flooding

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Unsuited

Management concerns: This map unit is severely limited as a site for dwellings because of the flooding. A site that has better suited soils should be selected.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Poor filtering capacity and flooding

Management measures and considerations:

- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

12—Arat mucky silt loam, 0 to 1 percent slopes, frequently flooded

Setting

Landform: Flood plains

Landform position: Depressions in backswamps

Shape of areas: Irregular

Size of areas: 5 to more than 40 acres

Composition

Arat and similar soils: 95 percent

Dissimilar soils: 5 percent

Typical Profile

Surface layer:

4 to 0 inches—partially decomposed leaves, stems, and twigs

0 to 12 inches—very dark gray mucky silt loam

Substratum:

12 to 59 inches—dark grayish brown silty clay loam

59 to 84 inches—grayish brown silty clay loam

Soil Properties and Qualities

Depth class: Very deep

Drainage class: Very poorly drained

Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to 3.0 feet above the surface from January through December
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: None
Content of organic matter in the surface layer: Very high

Minor Components

Dissimilar soils:
- Areas of Maurepas soils, which have thick organic layers in the upper part, in positions similar to those of the Arat soils
- Areas of somewhat poorly drained Mantachie soils on natural levees

Similar soils:
- Scattered areas of organic soils that have thin, sandy strata in the substratum
- Scattered areas of mineral soils that have thin layers of organic material in the substratum

Land Use

Dominant uses: Wildlife habitat
Other uses: Woodland

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding, wetness, and ponding. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding, wetness, and ponding. A site that has better suited soils should be selected.

Woodland
Suitability: Poorly suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- This soil is best reforested by managing for natural regeneration of hardwoods.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—very poor; wetland wildlife—good
Management concerns: Equipment use, ponding, and flooding
Management measures and considerations:
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers and by creating openings in the canopy. The openings encourage the growth of seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban

development because of the flooding, ponding, and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 7w

13—Daleville silt loam, 0 to 1 percent slopes

Setting

Landform: Terraces
Landform position: Flats and shallow swales
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Daleville and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark gray silt loam

Subsurface layer:
4 to 8 inches—gray silt loam

Subsoil:
8 to 16 inches—gray loam that has yellowish brown and dark yellowish brown mottles
16 to 23 inches—gray clay loam that has yellowish brown and red mottles
23 to 40 inches—grayish brown and gray clay loam that has reddish, brownish, and yellowish mottles
40 to 52 inches—dark grayish brown clay loam that has strong brown and dark brown mottles
52 to 62 inches—multicolored gray, red, dark gray, and yellow clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of somewhat poorly drained Lenoir and Quitman soils on the slightly higher rises and knolls
- Areas of very poorly drained Hyde soils in depressions

Similar soils:
- Scattered areas of Smithton soils, which have a subsoil with less clay than the subsoil of the Daleville soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife and wetland wildlife—good
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness

Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of restricted permeability and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 3w

14—Daleville loam, ponded

Setting

Landform: Terraces
Landform position: Shallow swales and depressions
Shape of areas: Round or oblong
Size of areas: 2 to 5 acres

Composition

Daleville and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark gray loam

Subsurface layer:
4 to 8 inches—gray loam

Subsoil:
8 to 16 inches—gray loam that has yellowish brown and dark yellowish brown mottles
16 to 23 inches—gray clay loam that has yellowish brown and red mottles
23 to 40 inches—grayish brown and gray clay loam that has reddish, brownish, and yellowish mottles
40 to 52 inches—dark grayish brown clay loam that has strong brown and dark brown mottles
52 to 80 inches—multicolored gray, red, dark gray, and yellow clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Apparent, from 1.5 feet above the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of somewhat poorly drained Quitman soils on the upper edges of depressions

Similar soils:
- Scattered areas of very poorly drained soils that have a thick, dark-colored surface layer

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the ponding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the ponding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Poorly suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—good
Management concerns: Equipment use, wetness, and ponding
Management measures and considerations:
- Wetland wildlife habitat can be improved by creating openings in the canopy. The openings provide areas of open water and encourage the growth of seed-producing grasses and forbs.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the ponding and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 6w

16—Eustis loamy sand, 2 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Summits, shoulder slopes, and side slopes
Shape of areas: Irregular
Size of areas: 5 to 20 acres

Composition

Eustis and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—dark yellowish brown loamy fine sand
9 to 20 inches—brown loamy fine sand
20 to 30 inches—strong brown loamy fine sand

Subsoil:
30 to 56 inches—yellowish red loamy sand
56 to 70 inches—strong brown loamy sand that has yellowish red mottles

Substratum:
70 to 82 inches—yellowish red fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of loamy Bama and Benndale soils on the lower parts of slopes
- Areas of poorly drained, loamy Smithton soils in drainageways

Similar soils:
- Scattered areas of Wadley soils, which have loamy textures within a depth of 40 to 80 inches

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and watermelons
Management concerns: Droughtiness, nutrient leaching, and fertility
Management measures and considerations:
- Conservation tillage, winter cover crops, crop residue management, and crop

rotations that include grasses and legumes increase available water capacity, minimize crusting, and improve fertility.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase production.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness, nutrient leaching, and fertility
Management measures and considerations:
- Using supplemental irrigation and seeding species that are adapted to droughty conditions increase production.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Seedling survival and equipment use
Management measures and considerations:
- Planting high-quality seedlings in a shallow furrow increases the seedling survival rate.
- Using improved varieties of loblolly pine or longleaf pine increases productivity.
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improve trafficability.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3s

17—Eustis loamy sand, 5 to 12 percent slopes

Setting

Landform: Hillslopes
Landform position: Side slopes and backslopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Eustis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—dark yellowish brown loamy fine sand
9 to 20 inches—brown loamy fine sand
20 to 30 inches—strong brown loamy fine sand

Subsoil:
30 to 56 inches—yellowish red loamy sand
56 to 70 inches—strong brown loamy sand that has yellowish red mottles

Substratum:
70 to 82 inches—yellowish red fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Eustis soils that have slopes of less than 5 percent or more than 12 percent
- Areas of loamy Freest soils on the lower parts of slopes
- Areas of clayey Susquehanna soils on the lower parts of slopes
- Areas of loamy Smithdale soils in positions similar to those of the Eustis soils
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Wadley soils, which have loamy textures within a depth of 40 to 80 inches

Land Use

Dominant uses: Woodland and pasture

Cropland
Suitability: Poorly suited

Management concerns: Erodibility, equipment use, droughtiness, and nutrient leaching

Management measures and considerations:
- Using a resource management system that includes contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of water.
- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland

Suitability: Suited

Commonly grown crops: Bahiagrass and improved bermudagrass

Management concerns: Erodibility, equipment use, droughtiness, and nutrient leaching

Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope can limit equipment use in the steeper areas when hay is harvested.
- Using drought-tolerant plants increases productivity.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland

Suitability: Suited

Management concerns: Equipment use and seedling survival

Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improve trafficability.
- Planting high-quality seedlings in a shallow furrow increases the seedling survival rate.
- Planting rates can be increased to compensate for the high rate of seedling mortality.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Droughtiness and fertility

Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Slope and poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 6s

18—Eustis loamy sand, 12 to 17 percent slopes

Setting

Landform: Hillslopes
Landform position: Side slopes and backslopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Eustis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—dark yellowish brown loamy fine sand
9 to 20 inches—brown loamy fine sand
20 to 30 inches—strong brown loamy fine sand

Subsoil:
30 to 56 inches—yellowish red loamy sand
56 to 70 inches—strong brown loamy sand that has yellowish red mottles

Substratum:
70 to 82 inches or more—yellowish red fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid
Available water capacity: Low
Seasonal high water table: At a depth of more than 6.0 feet

Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of moderately well drained, loamy Freest soils on the lower parts of slopes
- Areas of loamy Smithdale soils in positions similar to those of the Eustis soils
- Areas of poorly drained Smithton soils in drainageways
- Areas of clayey Susquehanna soils on the lower parts of slopes

Similar soils:
- Scattered areas of Wadley soils, which have loamy textures within a depth of 40 to 80 inches

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of erodibility, restricted equipment use, droughtiness, and nutrient leaching. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, equipment use, droughtiness, and nutrient leaching
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope can limit equipment use in the steeper areas when hay is harvested.
- Using drought-tolerant plants increases productivity.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Erodibility, equipment use, and seedling survival
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding disturbed areas with adapted grasses and legumes helps to control erosion and the siltation of streams.
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improve trafficability.
- Planting high-quality seedlings in a shallow furrow increases the seedling survival rate.
- Planting rates can be increased to compensate for the high rate of seedling mortality.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor

Management concerns: Droughtiness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Land grading or shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Suited
Management concerns: Slope and poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- Seeps and springs may be encountered in some areas during excavation of trenches. These areas should not be selected as a site for a septic tank absorption field.

Interpretive Group

Land capability classification: 7s

21—Bigbee loamy sand, 0 to 5 percent slopes, occasionally flooded

Setting

Landform: Low stream terraces and flood plains
Landform position: Convex slopes on terraces and on natural levees of flood plains
Shape of areas: Oblong
Size of areas: 5 to more than 20 acres

Composition

Bigbee and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 5 inches—dark gray loamy sand

Substratum:
5 to 33 inches—brownish yellow loamy sand

33 to 41 inches—brownish yellow loamy sand that has many streaks of uncoated sand
41 to 80 inches—yellow fine sand that has many streaks of uncoated sand
80 to 93 inches—light yellowish brown sand that has common streaks of uncoated sand and brownish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Rapid
Available water capacity: Low
Seasonal high water table: Apparent, at a depth of 3.5 to 6.0 feet from December through April
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of loamy Columbus and Latonia soils in positions similar to those of the Bigbee soil on terraces
- Areas of well drained, loamy Jena soils in slightly lower positions than those of the Bigbee soil on natural levees
- Areas of somewhat poorly drained Ocilla soils in slightly lower, less convex positions than those of the Bigbee soil on terraces
- Areas of very poorly drained Johnston soils in drainageways

Similar soils:
- Scattered areas of sandy Nugent soils, which have strata of loamy materials in the substratum

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture, hayland, and cropland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn and watermelons
Management concerns: Equipment use, droughtiness, nutrient leaching, and flooding
Management measures and considerations:
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
- Although most of the flooding occurs during the winter and spring, crop loss can occur during the growing season.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase production.
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase available water capacity, minimize crusting, and improve fertility.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass

Management concerns: Equipment use, droughtiness, nutrient leaching, and flooding
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, livestock and hay may be damaged during any time of the year.
- Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Seedling survival
Management measures and considerations:
- Planting seedlings during wet, cool seasons increases the seedling survival rate.
- Planting rates can be increased to compensate for the high rate of seedling mortality.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—poor; wetland wildlife—very poor
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for dwellings because of the flooding. A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the flooding, wetness, and poor filtering capacity. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 3s

22—Myatt loam, 0 to 1 percent slopes, occasionally flooded

Setting

Landform: Stream terraces
Landform position: Flats and swales
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Myatt and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 6 inches—very dark gray loam

Subsurface layer:
6 to 9 inches—dark grayish brown loam that has grayish brown and yellowish brown mottles

Subsoil:
9 to 13 inches—grayish brown loam that has strong brown and yellowish brown mottles
13 to 18 inches—gray loam that has yellowish brown mottles
18 to 30 inches—light brownish gray sandy clay loam that has yellowish brown and red mottles
30 to 50 inches—light brownish gray loam that has brownish yellow, olive brown, and strong brown mottles
50 to 59 inches—light brownish gray sandy loam

Substratum:
59 to 63 inches—gray fine sandy loam
63 to 84 inches—gray coarse sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of moderately well drained Columbus and Prentiss soils on knolls
- Areas of poorly drained Kinston and somewhat poorly drained Mantachie soils on narrow flood plains
- Areas of somewhat poorly drained Stough soils on low knolls and slight rises

Similar soils:
- Scattered areas of poorly drained soils that have a subsoil with more clay than the subsoil of the Myatt soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland and pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness, flooding, and fertility

Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Although most of the flooding occurs during the winter and spring, crop loss can occur during the growing season.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Although most of the flooding occurs during the winter and spring, livestock and hay crops can be damaged during any time of the year.
- Well maintained drainageways and ditches help to remove excess water.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—good
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from the flooding and wetness.

• Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorptions fields because of the flooding, restricted permeability, and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

24—Hyde silt loam

Setting

Landform: Low terraces and flood plains
Landform position: Depressions in backswamps (fig. 5)
Slope: 0 to 1 percent
Shape of areas: Oblong
Size of areas: 10 to 100 more than acres

Composition

Hyde and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 14 inches—black silt loam

Figure 5.—An area of Hyde silt loam. This very poorly drained soil is in flat or depressed areas on low terraces and remains wet for long periods. It generally supports a thick cover of shrubs and briars.

Subsoil:
14 to 18 inches—dark grayish brown silty clay loam that has grayish brown mottles
18 to 28 inches—grayish brown silty clay loam
28 to 48 inches—gray silty clay loam that has strong brown mottles
48 to 56 inches—gray clay loam

Substratum:
56 to 80 inches—stratified gray clay loam and sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Apparent, at the surface to a depth of 1.5 foot from December through May
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: High

Minor Components

Dissimilar soils:
- Areas of Croatan soils, which have organic surface and subsurface layers, in positions similar to those of the Hyde soil
- Areas of somewhat poorly drained, sandy Ocilla soils on low knolls
- Areas of somewhat poorly drained Quitman soils on low knolls

Similar soils:
- Scattered areas of poorly drained soils that do not have a thick, dark-colored surface layer

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and common bermudagrass
Management concerns: Wetness
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Well maintained drainageways and ditches help to remove excess water.

- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—fair
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the restricted permeability and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 6w

25—Quitman silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Landform position: Flat and slightly convex summits
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Quitman and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
7 to 11 inches—light yellowish brown silt loam that has strong brown mottles

Subsoil:
11 to 22 inches—olive yellow loam that has yellowish red and gray mottles
22 to 28 inches—multicolored light olive brown, gray, olive yellow, and red silty clay loam
28 to 34 inches—yellowish brown clay loam that has gray mottles
34 to 46 inches—multicolored gray, reddish brown, olive yellow, and weak red clay loam
46 to 65 inches—gray clay loam that has red and brownish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 1.5 to 2.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Daleville soils in shallow swales and depressions
- Areas of moderately well drained Harleston soils, which have a subsoil with less clay than the subsoil of the Quitman soil, on convex knolls
- Areas of moderately well drained Prentiss soils, which have a fragipan, on high knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Stough soils, which have a subsoil with less clay than the subsoil of the Quitman soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.

- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- An artificial drainage system may be needed to maximize productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- This soil is difficult to manage as a site for septic tank absorption fields because of the seasonal high water table at a depth of 1.5 to 2.0 feet. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 2w

26—Smithton loam, 0 to 1 percent slopes, occasionally flooded

Setting

Landform: Stream terraces
Landform position: Flats, swales, and drainageways
Shape of areas: Irregular
Size of areas: 20 to 100 acres

Composition

Smithton and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 3 inches—grayish brown loam

Subsurface layer:
3 to 15 inches—gray sandy loam that has yellowish brown mottles

Subsoil:
15 to 27 inches—grayish brown sandy loam that has yellowish brown mottles
27 to 38 inches—gray sandy loam that has yellowish brown mottles
38 to 54 inches—grayish brown sandy loam that has dark yellowish brown and reddish yellow mottles
54 to 61 inches—grayish brown sandy loam that has brownish yellow mottles

Substratum:
61 to 82 inches—gray sandy loam that has yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: Medium
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of moderately well drained Harleston soils on convex knolls
- Areas of somewhat poorly drained Johns and Stough soils in slightly higher, more convex positions than those of the Smithton soil

Similar soils:
- Scattered areas of Daleville soils, which have a subsoil with more clay than the subsoil of the Smithton soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Although most of the flooding occurs during the winter and spring, crop loss can occur during the growing season.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Although most of the flooding occurs during the winter and spring, livestock and hay crops can be damaged during any time of the year.
- An artificial drainage system may be needed to maximize productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment also minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—good
Management concerns: Wetness and flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.

- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness and flooding
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from the flooding and wetness.
- Using an artificial drainage system or installing diversions helps to remove excess surface water.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the flooding and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

27—Johns loamy fine sand, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Landform position: Flat and slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Johns and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 7 inches—very dark gray loamy fine sand

Subsurface layer:
7 to 16 inches—light yellowish brown sandy loam that has gray, brownish yellow, and red mottles

Subsoil:
16 to 26 inches—very pale brown sandy clay loam that has red and yellowish brown mottles
26 to 34 inches—multicolored gray, brownish yellow, red, and reddish yellow sandy loam

Substratum:
34 to 47 inches—light gray sand that has light olive brown mottles
47 to 82 inches—white sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: High

Seasonal high water table: Apparent, at a depth of 1.5 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Bayou and Smithton soils in shallow swales and drainageways
- Areas of moderately well drained Harleston soils on low knolls
- Areas of well drained Latonia soils on knolls
- Areas of Stough soils, which have a subsoil with less clay than the subsoil of the Johns soil, in positions similar to those of the Johns soil

Similar soils:
- Scattered areas of somewhat poorly drained Quitman soils, which have brittle and compact layers in the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland and pasture

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- An artificial drainage system may be needed to maximize productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor

Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

28—Vancleave loamy sand, 0 to 2 percent slopes

Setting

Landform: Marine terraces
Landform position: Slightly convex slopes on summits
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Vancleave and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
5 to 11 inches—light yellowish brown loamy sand

Subsoil:
11 to 22 inches—light olive brown sandy loam

22 to 31 inches—brownish yellow sandy loam fragipan that has light brownish gray, strong brown, and yellowish brown mottles
31 to 44 inches—strong brown fine sandy loam fragipan that has seams of light brownish gray loamy fine sand
44 to 51 inches—brownish yellow sandy loam fragipan that has gray and olive yellow mottles and has masses of nodular plinthite
51 to 71 inches—light gray sandy clay loam fragipan that has gray, yellowish brown, and strong brown mottles and has masses of nodular plinthite
71 to 84 inches—dark brown fine sandy loam fragipan that has gray, light gray, and brownish yellow mottles and has masses of nodular plinthite
84 to 90 inches—brownish yellow fine sandy loam that has light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.5 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of the poorly drained Atmore soils in shallow swales and depressions
- Areas of somewhat poorly drained Escambia soils in swales
- Areas of well drained Malbis and Poarch soils, which do not have a fragipan, on rises and knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of soils that are sand or loamy sand in the substratum and the lower part of the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, wheat, and grain sorghum
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase the amount of available water, decrease the extent of crusting, and improve the fertility of the soil.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility

Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing structures on the highest part of the landscape and installing an artificial drainage system reduce the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

29—Vancleave loamy sand, 2 to 5 percent slopes

Setting

Landform: Marine terraces
Landform position: Summits and side slopes

Shape of areas: Irregular
Size of areas: 10 to more than 50 acres

Composition

Vancleave and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
5 to 11 inches—light yellowish brown loamy sand

Subsoil:
11 to 22 inches—light olive brown sandy loam
22 to 31 inches—brownish yellow sandy loam fragipan that has light brownish gray, strong brown, and yellowish brown mottles
31 to 44 inches—strong brown fine sandy loam fragipan that has seams of light brownish gray loamy fine sand
44 to 51 inches—brownish yellow sandy loam fragipan that has gray and olive yellow mottles and has masses of nodular plinthite
51 to 71 inches—light gray sandy clay loam fragipan that has gray, yellowish brown, and strong brown mottles and has masses of nodular plinthite
71 to 84 inches—dark brown fine sandy loam fragipan that has gray, light gray, and brownish yellow mottles and has masses of nodular plinthite
84 to 90 inches—brownish yellow fine sandy loam that has light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.5 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of sandy Eustis soils on convex knolls
- Areas of well drained Malbis and Poarch soils, which do not have a fragipan, on knolls
- Areas of somewhat poorly drained Escambia soils in swales
- Areas of poorly drained Smithton soils in drainageways
- Areas of Vancleave soils that have slopes of more than 5 percent

Similar soils:
- Scattered areas of soils that are sand or loamy sand in the substratum and the lower part of the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, and grain sorghum
Management concerns: Erosion, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

30—Vancleave loamy sand, 5 to 8 percent slopes

Setting

Landform: Marine terraces
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 5 to more than 50 acres

Composition

Vancleave and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
5 to 11 inches—light yellowish brown loamy sand

Subsoil:
11 to 22 inches—light olive brown sandy loam
22 to 31 inches—brownish yellow sandy loam fragipan that has light brownish gray, strong brown, and yellowish brown mottles
31 to 44 inches—strong brown fine sandy loam fragipan that has seams of light brownish gray loamy fine sand
44 to 51 inches—brownish yellow sandy loam fragipan that has gray and olive yellow mottles and has masses of nodular plinthite
51 to 71 inches—light gray sandy clay loam fragipan that has gray, yellowish brown, and strong brown mottles and has masses of nodular plinthite
71 to 84 inches—dark brown fine sandy loam fragipan that has gray, light gray, and brownish yellow mottles and has masses of nodular plinthite
84 to 90 inches—brownish yellow fine sandy loam that has light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.5 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of somewhat poorly drained Escambia soils in swales and near heads of drains
- Areas of sandy Eustis and Wadley soils on convex knolls
- Areas of poorly drained Smithton soils in drainageways
- Areas of Vancleave soils that have slopes of less than 5 percent or more than 8 percent

Similar soils:
- Scattered areas of soils that are sand or loamy sand in the substratum and the lower part of the subsoil
- Scattered areas of soils that are clay or clay loam in the substratum

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resources management system that includes terraces and diversions, stripcropping, contour farming, conservation tillage, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.

Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Slope and wetness
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slope
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3e

32—Escambia very fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Marine terraces
Landform position: Flats
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Escambia and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsoil:
4 to 16 inches—light yellowish brown fine sandy loam that has gray mottles
16 to 22 inches—brownish yellow very fine sandy loam that has strong brown and light brownish gray mottles

22 to 31 inches—light yellowish brown loam that has strong brown and light brownish gray mottles and has masses of nodular plinthite
31 to 44 inches—light brownish gray loam that has strong brown and light gray mottles and has masses of nodular plinthite
44 to 58 inches—gray sandy clay loam that has grayish brown, yellowish brown, and yellowish red mottles and has masses of nodular plinthite
58 to 75 inches—gray sandy clay loam that has dark yellowish brown and yellowish red mottles
75 to 85 inches—gray sandy clay loam that has red and yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Atmore and Bayou soils in swales and shallow depressions
- Areas of well drained Benndale soils on knolls
- Areas of moderately well drained Saucier soils, which have a subsoil with more clay than the subsoil of the Escambia soil, in positions similar to those of the Escambia soil
- Areas of poorly drained Smithton soils in drainageways
- Areas of moderately well drained Vancleave soils, which have a fragipan, in positions similar to those of the Escambia soil

Similar soils:
- Scattered areas of somewhat poorly drained, loamy soils that are clay or silty clay in the lower part of the subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Using a conservation tillage system that maintains a maximum amount of ground cover increases the rate of rainfall infiltration into the soil and minimizes the loss of moisture due to evaporation.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- An artificial drainage system may be needed to maximize productivity.
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition (fig. 6).

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of

Figure 6.—An area of Escambia very fine sandy loam, 0 to 2 percent slopes, that is managed for pine timber production and as habitat for woodland wildlife and openland wildlife. Frequent controlled burns have reduced the woody understory and encouraged the growth of seed producing plants.

vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

33—Escambia very fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Marine terraces
Landform position: Side slopes and footslopes
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Escambia and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsoil:
4 to 16 inches—light yellowish brown fine sandy loam that has gray mottles
16 to 22 inches—brownish yellow very fine sandy loam that has strong brown and light brownish gray mottles
22 to 31 inches—light yellowish brown loam that has strong brown and light brownish gray mottles and has masses of nodular plinthite

31 to 44 inches—light brownish gray loam that has strong brown and light gray mottles and has masses of nodular plinthite
44 to 58 inches—gray sandy clay loam that has grayish brown, yellowish brown, and yellowish red mottles and has masses of nodular plinthite
58 to 75 inches—gray sandy clay loam that has dark yellowish brown and yellowish red mottles
75 to 85 inches—gray sandy clay loam that has red and yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Atmore and Bayou soils in shallow depressions and around heads of drainageways
- Areas of well drained Benndale soils on convex knolls
- Areas of moderately well drained Saucier soils, which have a subsoil with more clay than the subsoil of the Escambia soil, in positions similar to those of the Escambia soil
- Areas of poorly drained Smithton soils in drainageways
- Areas of moderately well drained Vancleave soils, which have a fragipan, on lower parts of slopes

Similar soils:
- Scattered areas of somewhat poorly drained, loamy soils that are clay or silty clay in the lower part of the subsoil

Land Use

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

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Erodibility, wetness, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

36—Smithdale-Boykin complex, 5 to 17 percent slopes

Setting

Landform: Hillslopes
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 100 acres

Composition

Smithdale and similar soils: 55 percent
Boykin and similar soils: 30 percent
Dissimilar soils: 15 percent

Typical Profile

Smithdale

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

Subsurface layer:
5 to 13 inches—yellowish brown fine sandy loam

Subsoil:
13 to 42 inches—red sandy clay loam
42 to 52 inches—yellowish red sandy loam
52 to 64 inches—yellowish red sandy loam that has yellowish brown mottles

Boykin

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

Subsurface layer:
7 to 22 inches—yellowish brown loamy sand

Subsoil:
22 to 27 inches—strong brown sandy clay loam
27 to 80 inches—yellowish red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Smithdale—moderate; Boykin—rapid in the surface and subsurface layers and moderate in the subsoil
Available water capacity: Smithdale—high; Boykin—low
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Boykin and Smithdale soils that have slopes of less than 5 percent or more than 17 percent
- Areas of Benndale soils, which have a brownish subsoil and do not have thick, sandy surface and subsurface layers; in positions similar to those of the Smithdale soils

- Areas of sandy Eustis and Wadley soils in positions similar to those of the Boykin soil
- Areas of poorly drained Smithton soils in drainageways
- Areas of clayey Susquehanna soils on the lower parts of slopes

Similar soils:
- Areas of Bama and Ruston soils, which have a subsoil with more clay in the lower part than the subsoil of the Smithdale soil, on summits of narrow ridges

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and wheat
Management concerns: Erodibility, equipment use, and droughtiness
Management measures and considerations:
- This map unit is difficult to manage for crop production because the slope limits the use of equipment.
- Using a resource management system that includes contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, equipment use, and droughtiness
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope can limit equipment use in the steeper areas when hay is harvested.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Smithdale—equipment use and erodibility; Boykin—equipment use, erodibility, and seedling survival
Management measures and considerations:
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitations.
- Using tracked or low-pressure ground equipment minimizes rutting and root compaction during harvesting.
- Planting rates can be increased to compensate for the high rate of seedling mortality in areas of the Boykin soil.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor

Management concerns: Erodibility, equipment use, and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and helps to keep soil on the site.

Septic tank absorption fields
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- Seeps and springs may be encountered in some areas during excavation of trenches. These areas should not be selected as a site for a septic tank absorption field.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: Smithdale—6e; Boykin—6s

44—Malbis fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Ridges
Landform position: Summits
Shape of areas: Irregular
Size of areas: 5 to more than 50 acres

Composition

Malbis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
8 to 27 inches—light yellowish brown and yellowish brown loam

27 to 46 inches—yellowish brown and brownish yellow loam that has masses of nodular plinthite
46 to 80 inches—brownish yellow and yellowish brown clay loam that has red and gray mottles and has masses of nodular plinthite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 2.5 to 4.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama and Ruston soils, which have a reddish subsoil, in positions similar to those of the Malbis soil
- Areas of Benndale and Poarch soils, which have a subsoil with less clay than the subsoil of the Malbis soil, on knolls
- Areas of moderately well drained Saucier soils in shallow swales
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Malbis soils that are moderately well drained

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: No significant limitations affect crop production.
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: No significant limitations affect management of pasture and hayland.
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor

Management concerns: No significant limitations affect management for wildlife habitat.

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Well suited

Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Wetness and restricted permeability

Management measures and considerations:

- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 1

45—Malbis fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Ridges

Landform position: Side slopes

Shape of areas: Irregular

Size of areas: 5 to more than 50 acres

Composition

Malbis and similar soils: 85 percent

Dissimilar soils: 15 percent

Typical Profile

Surface layer:

0 to 8 inches—brown fine sandy loam

Subsoil:

8 to 27 inches—light yellowish brown and yellowish brown loam

27 to 46 inches—yellowish brown and brownish yellow loam that has masses of nodular plinthite

46 to 80 inches—brownish yellow and yellowish brown clay loam that has red and gray mottles and has masses of nodular plinthite

Soil Properties and Qualities

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 2.5 to 4.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama and Ruston soils, which have a reddish subsoil, in positions similar to those of the Malbis soil
- Areas of Benndale and Poarch soils, which have a subsoil with less clay than the subsoil of the Malbis soil, on narrow ridges
- Areas of moderately well drained Saucier soils in shallow swales and around heads of drains
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Malbis soils that are moderately well drained

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, corn, soybeans, wheat, and grain sorghum
Management concerns: Erosion and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erosion and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor

Management concerns: No significant limitations affect management for wildlife habitat.

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Well suited

Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Wetness and restricted permeability

Management measures and considerations:

- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

48—Suffolk loamy sand, 0 to 2 percent slopes

Setting

Landform: Ridges

Landform position: Summits

Shape of areas: Irregular

Size of areas: 10 to more than 50 acres

Composition

Suffolk and similar soils: 90 percent

Dissimilar soils: 10 percent

Typical Profile

Surface layer:

0 to 6 inches—brown loamy sand

Subsurface layer:

6 to 9 inches—light yellowish brown fine sandy loam

Subsoil:

9 to 34 inches—yellowish brown loam that has yellowish red mottles in the lower part

34 to 37 inches—olive yellow fine sandy loam that has red mottles

Substratum:

37 to 72 inches—pale yellow loamy fine sand

72 to 86 inches—pale yellow fine sand that has yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the subsoil and moderately rapid in the substratum
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Benndale soils, which have a subsoil with less clay in the upper part than the subsoil of the Suffolk soil, on convex knolls
- Areas of sandy Eustis soils on high knolls
- Areas of poorly drained Daleville soils in swales and shallow depressions

Similar soils:
- Scattered areas of well drained soils that have a reddish subsoil

Land Use

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

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of

vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: Restricted permeability
Management measures and considerations:
- Increasing the size of septic tank absorption fields improves the performance of the field, and installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 1

50—Ruston fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Ridges
Landform position: Summits
Shape of areas: Irregular
Size of areas: 20 to more than 100 acres

Composition

Ruston and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
6 to 11 inches—light yellowish brown sandy loam

Subsoil:
11 to 20 inches—yellowish red sandy clay loam
20 to 30 inches—red clay loam
30 to 36 inches—red loam that has streaks and pockets of yellowish brown sandy loam
36 to 48 inches—yellowish red clay loam
48 to 62 inches—red clay loam that has olive yellow mottles
62 to 80 inches—red loam that has olive yellow and brownish yellow mottles
80 to 84 inches—brownish yellow loam that has yellowish brown and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Benndale soils, which have a brownish subsoil, in positions similar to those of the Ruston soil
- Areas of sandy Wadley soils on high knolls
- Areas of poorly drained Smithton soils in depressions and shallow drainageways

Similar soils:
- Scattered areas of Bama soils, which do not have streaks and pockets of sandy loam in the lower part of the profile
- Scattered areas of Smithdale soils that have a subsoil with less clay in the lower part than the subsoil of the Ruston soil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of

vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.

- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: Restricted permeability
Management measures and considerations:

- Increasing the size of septic tank absorption fields improves the performance of the fields.

Interpretive Group

Land capability classification: 1

51—Bama fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Ridges
Landform position: Summits
Shape of areas: Irregular
Size of areas: 20 to more than 300 acres

Composition

Bama and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
3 to 10 inches—yellowish brown fine sandy loam

Subsoil:
10 to 25 inches—red sandy clay loam
25 to 40 inches—yellowish red sandy clay loam
40 to 48 inches—red loam
48 to 59 inches—yellowish red clay loam
59 to 78 inches—red clay loam and loam
78 to 84 inches—brownish yellow loam that has light yellowish brown and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High

Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Benndale and Malbis soils, which have a brownish subsoil, in positions similar to those of the Bama soil
- Areas of sandy Eustis soils on high knolls
- Areas of poorly drained Myatt soils in narrow swales

Similar soils:
- Scattered areas of well drained, loamy soils that are dark red throughout the subsoil
- Scattered areas of reddish soils that have a subsoil with less clay than the subsoil of the Bama soil

Land Use

Dominant uses: Cropland and pasture
Other uses: Woodland and hayland

Cropland
Suitability: Well suited (fig. 7)
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Figure 7.—An area of Bama fine sandy loam, 0 to 2 percent slopes, that has been cultivated in preparation for planting. This soil is classified as prime farmland and is well suited to pasture, hay, and cultivated crops.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Fertility
Management measures and considerations:
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Interpretive Group

Land capability classification: 1

52—Bama fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes and shoulder slopes
Shape of areas: Irregular
Size of areas: 20 to more than 150 acres

Composition

Bama and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
3 to 10 inches—yellowish brown fine sandy loam

Subsoil:
10 to 25 inches—red sandy clay loam
25 to 40 inches—yellowish red sandy clay loam
40 to 48 inches—red loam
48 to 59 inches—yellowish red clay loam
59 to 78 inches—red clay loam and loam
78 to 84 inches—brownish yellow loam that has light yellowish brown and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama soils that have slopes of less than 2 percent or more than 5 percent
- Areas of well drained Benndale and Malbis soils, which have a brownish subsoil, in positions similar to those of the Bama soil
- Areas of sandy Eustis soils on the lower parts of slopes
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Smithdale soils, which have a subsoil with less clay in the lower part than the subsoil of the Bama soil

Land Use

Dominant uses: Cropland and pasture
Other uses: Woodland and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Erodibility and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited

Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Fertility
Management measures and considerations:
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Interpretive Group

Land capability classification: 2e

53—Bama fine sandy loam, 5 to 8 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 20 to more than 40 acres

Composition

Bama and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
3 to 10 inches—yellowish brown fine sandy loam

Subsoil:
10 to 25 inches—red sandy clay loam
25 to 40 inches—yellowish red sandy clay loam
40 to 48 inches—red loam
48 to 59 inches—yellowish red clay loam
59 to 78 inches—red clay loam and loam
78 to 84 inches—brownish yellow loam that has light yellowish brown and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama soils that have slopes of less than 5 percent or more than 8 percent
- Areas of Benndale soils, which have a brownish subsoil, in positions similar to those of the Bama soil
- Areas of sandy Eustis and Wadley soils on the lower parts of slopes
- Areas of poorly drained Johnston soils in narrow drainageways

Similar soils:
- Scattered areas of Smithdale soils, which have a subsoil with less clay in the lower part than the subsoil of the Bama soil

Land Use

Dominant uses: Pasture and hayland
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Erodibility and fertility
Management measures and considerations:
- Using a resources management system that includes terraces and diversions, stripcropping, contour farming, conservation tillage, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility and fertility

Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3e

55—Ocilla loamy sand, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Low stream terraces
Landform position: Flat and slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Ocilla and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
10 to 19 inches—grayish brown loamy sand that has brown and reddish yellow mottles
19 to 27 inches—light yellowish brown loamy sand that has brown mottles

Subsoil:
27 to 33 inches—grayish brown sandy loam that has yellowish brown mottles
33 to 52 inches—light gray sandy clay loam that has brownish yellow mottles
52 to 62 inches—light gray sandy loam

Substratum:
62 to 68 inches—very pale brown sandy loam that has gray mottles
68 to 86 inches—light gray sandy loam that has light olive brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: Low
Seasonal high water table: Perched, at a depth of 1.0 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of excessively drained Bigbee soils on convex knolls
- Areas of well drained Latonia soils on rises and knolls
- Areas of poorly drained Myatt and Smithton soils in swales

Similar soils:
- Scattered areas of moderately well drained, sandy soils
- Scattered areas of Ocilla soils that have brittle and compact layers in the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, wheat, and grain sorghum
Management concerns: Flooding, wetness, droughtiness, and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, droughtiness, flooding, and fertility
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, livestock and hay crops can be damaged during any time of the year.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Harvesting timber during the summer and fall reduces the risk of damage from flooding.
- Using tracked or low-pressure ground equipment minimizes rutting and root compaction during harvesting.
- Planting rates can be increased to compensate for the high rate of seedling mortality.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and wetland wildlife—fair; woodland wildlife—good
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for dwellings because of the flooding. A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the flooding and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

56—Benndale fine sandy loam, 3 to 8 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to more than 80 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
6 to 18 inches—light yellowish brown sandy loam
18 to 44 inches—yellowish brown loam
44 to 61 inches—brownish yellow sandy clay loam that has red mottles
61 to 74 inches—brownish yellow loam and sandy clay loam with red mottles

Substratum:
74 to 81 inches—red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama soils, which have a reddish subsoil, in positions similar to those of the Benndale soil
- Areas of sandy Eustis and Wadley soils on the lower parts of slopes
- Areas of very poorly drained Johnston soils in drainageways

Similar soils:
- Scattered areas of Poarch soils, which have a significant accumulation of plinthite in the subsoil

- Scattered areas of well drained, loamy soils that have a subsoil with less clay in the lower part than the subsoil of the Benndale soil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resources management system that includes terraces and diversions, stripcropping, contour farming, conservation tillage, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years,

rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3e

57—Poarch fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Summits of narrow ridges and side slopes
Shape of areas: Irregular
Size of areas: 10 to more than 100 acres

Composition

Poarch and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
4 to 10 inches—light yellowish brown fine sandy loam that has a few concretions of ironstone

Subsoil:
10 to 18 inches—yellowish brown sandy loam
18 to 27 inches—brownish yellow sandy loam
27 to 33 inches—brownish yellow loam that has masses of nodular plinthite
33 to 50 inches—brownish yellow loam that has very pale brown mottles and has masses of nodular plinthite
50 to 58 inches—light yellowish brown loam that has red, yellowish brown, and light brownish gray mottles and has masses of nodular plinthite
58 to 73 inches—mottled light gray, strong brown, dark red, and yellowish red loam

Substratum:
73 to 81 inches—mottled strong brown, light gray, and reddish brown loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 2.5 to 5.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Atmore soils in small depressions
- Areas of Bama and Ruston soils, which have a reddish subsoil, on convex knolls
- Areas of somewhat poorly drained Escambia soils in shallow swales
- Areas of Malbis soils, which have a subsoil with more clay than the subsoil of the Poarch soil, in positions similar to those of the Poarch soil
- Areas of sandy Eustis soils on high, convex knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of moderately well drained, loamy soils

Land Use

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

Cropland
Suitability: Well suited
Commonly grown crops: Corn, cotton, wheat, and grain sorghum
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erosion, droughtiness, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- Increasing the size of septic tank absorption fields improves the performance of the fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

58—Benndale fine sandy loam, 8 to 12 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to more than 150 acres

Composition

Benndale and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
6 to 18 inches—light yellowish brown sandy loam
18 to 44 inches—yellowish brown loam
44 to 61 inches—brownish yellow sandy clay loam that has red mottles
61 to 74 inches—brownish yellow loam and sandy clay loam with red mottles

Substratum:
74 to 81 inches—red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Bama and Ruston soils, which have a reddish subsoil, on summits of narrow ridges
- Areas of Benndale soils that have a slope of less than 8 percent or more than 12 percent
- Areas of sandy Eustis and Wadley soils in positions similar to those of the Benndale soil
- Areas of very poorly drained Johnston soils in narrow drainageways
- Areas of Smithdale soils, which have a reddish subsoil, in positions similar to those of the Benndale soil

Similar soils:
- Scattered areas of Poarch soils, which have a significant accumulation of plinthite in the subsoil
- Scattered areas of brownish, moderately well drained soils that have a subsoil with more clay than the subsoil of the Benndale soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, cotton, and soybeans
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of water.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited

Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, droughtiness, equipment use, and fertility
Management measures and considerations:
• The slope can limit equipment use in the steeper areas when hay is harvested.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
• Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
• Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
• Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
• Structures can be designed to conform to the natural slope.
• Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.

Septic tank absorption fields
Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
• Installing distribution lines on the contour improves the performance of septic tank absorption fields.
• The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 4e

62—Prentiss silt loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Landform position: Summits
Shape of areas: Irregular
Size of areas: 10 to 80 acres

Composition

Prentiss and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown silt loam

Subsoil:
5 to 16 inches—brownish yellow loam
16 to 23 inches—light yellowish brown sandy loam that has light gray and gray mottles
23 to 51 inches—light yellowish brown sandy loam and brownish yellow fine sandy loam fragipan with reddish, grayish, and brownish mottles
51 to 80 inches—multicolored strong brown, red, and light brownish gray fine sandy loam fragipan

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 2.0 to 2.5 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of well drained Benndale soils, which do not have a fragipan, on convex knolls
- Areas of Harleston soils, which do not have a fragipan, in positions similar to those of the Prentiss soil
- Areas of poorly drained Smithton soils in drainageways
- Areas of somewhat poorly drained Stough soils in shallow swales

Similar soils:
- Scattered areas of soils that have a subsoil with slightly more clay than the subsoil of the Prentiss soil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, wheat, and grain sorghum

Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Delaying spring planting minimizes the clodding and rutting that occurs if equipment is used when the soil is wet.
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase the amount of available water, decrease the extent of crusting, and improve the fertility of the soil.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing structures on the highest part of the landscape and installing an artificial drainage system reduce the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability

Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

63—Stough loam, 0 to 2 percent slopes

Setting

Landform: Stream terraces
Landform position: Flat and slightly convex slopes on summits
Shape of areas: Irregular
Size of areas: 10 to 40 acres

Composition

Stough and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
5 to 12 inches—light yellowish brown sandy loam that has strong brown and light brownish gray mottles

Subsoil:
12 to 30 inches—light yellowish brown loam that has brownish yellow and reddish gray mottles
30 to 36 inches—light olive brown loam that has grayish brown and light yellowish brown mottles
36 to 48 inches—brownish yellow sandy clay loam that has gray and brownish yellow mottles
48 to 58 inches—mottled gray, brownish yellow, and strong brown loam
58 to 86 inches—light yellowish brown sandy loam that has gray and reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Available water capacity: Medium
Seasonal high water table: Perched, at a depth of 1.0 to 1.5 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Daleville and Smithton soils in swales and drainageways

- Areas of moderately well drained Harleston soils on rises and knolls
- Areas of moderately well drained Prentiss soils, which have a fragipan, on knolls

Similar soils:
- Scattered areas of Quitman soils, which have a subsoil with more clay than the subsoil of the Stough soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- An artificial drainage system may be needed to maximize productivity.
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small

tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

66—Freest sandy loam, 2 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes and footslopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Freest and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
3 to 6 inches—brown sandy loam

Subsoil:
6 to 17 inches—olive yellow loam that has brown and dark yellowish brown mottles
17 to 23 inches—yellowish brown sandy clay loam that has brownish gray and red mottles
23 to 45 inches—yellowish brown clay loam that has red and light gray mottles
45 to 56 inches—yellowish brown clay loam that has red and light gray mottles
56 to 78 inches—yellowish brown silty clay that has light gray, brownish yellow, and strong brown mottles

Substratum:
78 to 88 inches—light brownish gray clay that has strong brown and light reddish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: High
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of sandy Eustis soils on the upper parts of slopes
- Areas of Freest soils that have slopes of more than 5 percent
- Areas of poorly drained Smithton soils in drainageways
- Areas of clayey Susquehanna soils on knolls and narrow ridges

Similar soils:
- Scattered areas of Freest soils that have a surface layer of loam or clay loam

Land Use

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

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, and small grains
Management concerns: Erodibility and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants

Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Shrink-swell potential
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- Increasing the size of septic tank absorption fields improves the performance of the field, and installing distribution lines during dry periods minimizes smearing and sealing of trench walls.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

68—Saucier fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Ridges
Landform position: Flat summits, shallow swales, and heads of drains
Shape of areas: Irregular
Size of areas: 5 to 200 acres

Composition

Saucier and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsoil:
5 to 11 inches—yellowish brown loam
11 to 17 inches—brownish yellow loam that has yellowish red mottles
17 to 27 inches—brownish yellow loam that has pale brown and yellowish red mottles and has nodules of plinthite
27 to 39 inches—brownish yellow silty clay loam that has light brownish gray and yellowish red mottles and has nodules of plinthite
39 to 47 inches—multicolored light brownish gray, red, strong brown, and brownish yellow clay loam that has nodules of plinthite
47 to 70 inches—multicolored light gray, red, and brownish yellow clay loam that has nodules of plinthite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: High
Seasonal high water table: Perched, at a depth of 2.5 to 4.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of well drained Benndale soils, which have a subsoil with less clay than the subsoil of the Saucier soil, on convex knolls
- Areas of somewhat poorly drained Escambia soils in swales
- Areas of well drained Malbis soils on convex knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of moderately well drained, loamy soils that have brittle and compact layers in the subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, soybeans, corn, wheat, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
• Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
• Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
• Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—fair
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
• Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
• The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

76—Nugent and Jena soils, frequently flooded

Setting

Landform: Flood plains
Landform position: Natural levees
Slope: 0 to 2 percent
Shape of areas: Long and narrow
Size of areas: 10 to 100 acres

Composition

Nugent and similar soils: 50 percent
Jena and similar soils: 40 percent
Dissimilar soils: 10 percent

Typical Profile

Nugent

Surface layer:
0 to 6 inches—brown loamy sand

Substratum:
6 to 16 inches—brown loamy sand
16 to 30 inches—pale brown loamy sand
30 to 46 inches—brown fine sandy loam that has strong brown mottles
46 to 60 inches—pale brown sand

Jena

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

Subsoil:
6 to 36 inches—brown fine sandy loam
36 to 46 inches—pale brown sandy loam that has dark yellowish brown mottles
46 to 65 inches—light yellowish brown loamy fine sand that has dark yellowish brown and pale brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Nugent—excessively drained; Jena—well drained
Permeability: Nugent—moderately rapid; Jena—moderate
Available water capacity: Nugent—low; Jena—medium
Seasonal high water table: Nugent—apparent, at a depth of 3.5 to 6.0 feet from December through April; Jena—at a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of moderately well drained Columbus soils and well drained Latonia soils on convex knolls and rises
- Areas of poorly drained Kinston soils in sloughs
- Areas of somewhat poorly drained Mantachie soils on low parts of natural levees

Similar soils:
- Scattered areas of sandy soils that do not have strata of loamy material in the substratum
- Scattered areas of Jena soils that have a surface layer of loamy sand or sand

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Soybeans, corn, and grain sorghum
Management concerns: Flooding
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, crop loss can occur during the growing season.
- Harvesting row crops as soon as possible reduces the risk of damage from flooding.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and common bermudagrass
Management concerns: Flooding
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, livestock and hay crops can be damaged during any time of the year.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.

Woodland
Suitability: Poorly suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Using tracked or low-pressure ground equipment minimizes rutting and root compaction during harvesting.
- Restricting logging operations to periods when the soil is not saturated minimizes rutting and the damage caused to tree roots by compaction.
- Harvesting timber during the summer and fall reduces the risk of damage from the flooding.
- Planting rates can be increased to compensate for the high rate of seedling mortality.
- Site preparation practices, such as chopping and the application of herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife and wetland wildlife—fair
Management concerns: Flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.

- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers and by creating openings in the canopy. The openings encourage the growth of seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the flooding. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 5w

78—Susquehanna-Freest complex, 1 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Summits and side slopes
Shape of areas: Irregular
Size of areas: 20 to 150 acres

Composition

Susquehanna and similar soils: 50 percent
Freest and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Susquehanna

Surface layer:
0 to 5 inches—dark grayish brown silt loam

Subsoil:
5 to 11 inches—light brown clay that has light brownish gray mottles
11 to 23 inches—strong brown clay that has light brownish gray, red, and yellowish brown mottles
23 to 34 inches—multicolored yellowish red, brownish yellow, brownish gray, and red clay
34 to 39 inches—multicolored yellowish red, gray, yellowish brown, and red silty clay
39 to 45 inches—multicolored light brownish gray, red, and brownish yellow silty clay
45 to 80 inches—gray silty clay that has red, strong brown, and brownish yellow mottles

Freest

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

Subsurface layer:
3 to 6 inches—brown sandy loam

Subsoil:
6 to 17 inches—olive yellow loam that has brown and dark yellowish brown mottles
17 to 23 inches—yellowish brown sandy clay loam that has light brownish gray and red mottles
23 to 56 inches—yellowish brown clay loam that has light gray and red mottles

56 to 78 inches—yellowish brown silty clay that has light gray, brownish yellow, and strong brown mottles

Substratum:
78 to 88 inches—light brownish gray clay that has strong brown and light reddish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Susquehanna—somewhat poorly drained; Freest—moderately well drained
Permeability: Susquehanna—very slow; Freest—slow
Available water capacity: Susquehanna—medium; Freest—high
Seasonal high water table: Susquehanna—at a depth of more than 6.0 feet; Freest—perched, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: High
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of loamy, well drained Benndale and Malbis soils on high knolls
- Areas of Boykin soils, which have thick, sandy surface and subsurface layers; on knolls and shoulder slopes
- Areas of very poorly drained Johnston soils in drainageways
- Areas of loamy, well drained Smithdale soils on knolls and shoulder slopes
- Areas of Susquehanna and Freest soils that have slopes of more than 5 percent

Similar soils:
- Scattered areas of moderately well drained, clayey soils

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Erodibility and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.

- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland

Suitability: Well suited

Management concerns: Susquehanna—equipment use; Freest—equipment use and competition from undesirable plants

Management measures and considerations:

- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor

Management concerns: Erodibility

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Shrink-swell potential

Management measures and considerations:

- Reinforcing foundations and footings or backfilling with coarse-textured material prevents the damage caused by shrinking and swelling.

Septic tank absorption fields

Suitability: Susquehanna—unsuited; Freest—poorly suited

Management concerns: Susquehanna—restricted permeability; Freest—wetness and restricted permeability

Management measures and considerations:

- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems in areas of the Freest soil.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: Susquehanna—3e; Freest—2e

79—Susquehanna-Freest complex, 5 to 8 percent slopes

Setting

Landform: Ridges
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 100 acres

Composition

Susquehanna and similar soils: 50 percent
Freest and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Susquehanna

Surface layer:
0 to 5 inches—dark grayish brown silt loam

Subsoil:
5 to 11 inches—light brown clay that has light brownish gray mottles
11 to 23 inches—strong brown clay that has light brownish gray, red, and yellowish brown mottles
23 to 34 inches—multicolored yellowish red, brownish yellow, brownish gray, and red clay
34 to 39 inches—multicolored yellowish red, gray, yellowish brown, and red silty clay
39 to 45 inches—multicolored light brownish gray, red, and brownish yellow silty clay
45 to 80 inches—gray silty clay that has red, strong brown, and brownish yellow mottles

Freest

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

Subsurface layer:
3 to 6 inches—brown sandy loam

Subsoil:
6 to 17 inches—olive yellow loam that has brown and dark yellowish brown mottles
17 to 23 inches—yellowish brown sandy clay loam that has light brownish gray and red mottles
23 to 56 inches—yellowish brown clay loam that has light gray and red mottles
56 to 78 inches—yellowish brown silty clay that has light gray, brownish yellow, and strong brown mottles

Substratum:
78 to 88 inches—light brownish gray clay that has strong brown and light reddish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Susquehanna—somewhat poorly drained; Freest—moderately well drained
Permeability: Susquehanna—very slow; Freest—slow
Available water capacity: Susquehanna—medium; Freest—high

Seasonal high water table: Susquehanna—at a depth of more than 6.0 feet; Freest—perched, at a depth of 1.5 to 2.5 feet from December through April
Shrink-swell potential: High
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of loamy Benndale and Malbis soils on high knolls
- Areas of Boykin soils, which have thick, sandy surface and subsurface layers; on knolls and shoulder slopes
- Areas of very poorly drained Johnston soils in drainageways
- Areas of loamy, well drained Smithdale soils on knolls and shoulder slopes
- Areas of Susquehanna and Freest soils that have slopes of less than 5 percent or more than 8 percent

Similar soils:
- Scattered areas of Susquehanna and Freest soils that have a surface layer of clay loam
- Scattered areas of moderately well drained, clayey soils

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Cotton, corn, soybeans, and grain sorghum
Management concerns: Erodibility and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour farming, conservation tillage, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Susquehanna—equipment use; Freest—equipment use and competition from undesirable plants

Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell potential
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material prevents the damage caused by shrinking and swelling.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and helps to keep soil on the site.

Septic tank absorption fields
Suitability: Susquehanna—unsuited; Freest—poorly suited
Management concerns: Susquehanna—restricted permeability; Freest—wetness and restricted permeability
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems in areas of the Freest soil.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: Susquehanna—4e; Freest—3e

80—Susquehanna silt loam, 8 to 12 percent slopes

Setting

Landform: Hillslopes
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Susquehanna and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 5 inches—dark grayish brown silt loam

Subsoil:
5 to 11 inches—light brown clay that has light brownish gray mottles
11 to 23 inches—strong brown clay that has light brownish gray, red, and yellowish brown mottles
23 to 34 inches—multicolored yellowish red, brownish yellow, brownish gray, and red clay
34 to 39 inches—multicolored yellowish red, gray, yellowish brown, and red silty clay
39 to 45 inches—multicolored light brownish gray, red, and brownish yellow silty clay
45 to 80 inches—gray silty clay that has red, strong brown, and brownish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: High
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of loamy, moderately well drained Freest soils on knolls and shoulder slopes
- Areas of very poorly drained Johnston soils in drainageways
- Areas of loamy, well drained Smithdale soils in positions similar to those of the Susquehanna soils
- Areas of Susquehanna soils that have slopes of less than 8 percent or more than 12 percent

Similar soils:
- Scattered areas of Susquehanna soils that have a surface layer of clay loam

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Poorly suited
Management concerns: Erodibility, equipment use, and fertility
Management measures and considerations:
- This map unit is difficult to manage for crop production because the slope limits the use of equipment.
- Using a resource management system that includes contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes infiltration of water.

- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited to pasture; suited to hayland
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, equipment use, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- The slope can limit equipment use in the steeper areas when hay is harvested.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.
- Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
- Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell potential
Management measures and considerations:
- Reinforcing foundations and footings or backfilling with coarse-textured material prevents the damage caused by shrinking and swelling.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and helps to keep soil on the site.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the restricted permeability. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 6e

84—Wadley loamy sand, 0 to 5 percent slopes

Setting

Landform: Ridges
Landform position: Summits, shoulder slopes, and side slopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Wadley and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
2 to 13 inches—yellowish brown loamy sand
13 to 25 inches—brownish yellow loamy sand
25 to 52 inches—yellowish brown loamy sand
52 to 72 inches—pale brown fine sand and brownish yellow loamy fine sand

Subsoil:
72 to 83 inches—light yellowish brown sandy loam
83 to 90 inches—brownish yellow sandy clay loam that has light gray and red mottles and has masses of nodular plinthite
90 to 100 inches—multicolored brownish yellow, dark grayish brown, light gray, and light olive brown sandy clay loam that has masses of nodular plinthite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid in the surface and subsurface layers and moderate in the subsoil
Available water capacity: Low
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very low

Minor Components

Dissimilar soils:
- Areas of Bama and Benndale soils, which do not have thick, sandy surface and subsurface layers; on knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Boykin soils, which have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and watermelons
Management concerns: Droughtiness, nutrient leaching, and fertility
Management measures and considerations:
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase available water capacity, minimize crusting, and improve fertility.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase production.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness, nutrient leaching, and fertility
Management measures and considerations:
- Using supplemental irrigation and seeding species that are adapted to droughty conditions increase production.
- Using split applications increases the effectiveness of fertilizer and herbicides.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Seedling survival and equipment use
Management measures and considerations:
- Planting high-quality seedlings in a shallow furrow increases the seedling survival rate.
- Using improved varieties of loblolly pine or longleaf pine increases productivity.
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improve trafficability.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Interpretive Group

Land capability classification: 3s

85—Leon mucky sand, 0 to 1 percent slopes

Setting

Landform: Marine terraces
Landform position: Flats
Shape of areas: Irregular
Size of areas: 5 to 30 acres

Composition

Leon and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
2 to 0 inches—fresh and partially decomposed leaves, twigs, acorns, and pine needles
0 to 6 inches—black mucky sand

Subsurface layer:
6 to 13 inches—light gray sand

Subsoil:
13 to 38 inches—black loamy sand
38 to 43 inches—strong brown sand

Substratum:
43 to 62 inches—white sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Available water capacity: Low
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very high

Minor Components

Dissimilar soils:
- Areas of loamy Harleston and Latonia soils on knolls and rises
- Areas of somewhat excessively drained Wadley soils, which have a loamy subsoil, on knolls and rises
- Areas of loamy Smithton soils in drainageways

Similar soils:
- Scattered areas of Leon soils that have a surface layer of sand
- Scattered areas of somewhat poorly drained, sandy soils that do not have dark subsoil layers within a depth of 30 inches

Land Use

Dominant uses: Woodland and wildlife habitat

Cropland
Suitability: Poorly suited
Commonly grown crops: None
Management concerns: Equipment use, wetness, droughtiness, and fertility
Management measures and considerations:
- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Using frequent, light applications of irrigation water helps to prevent leaching of plant nutrients and pesticides to below the plant roots.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Equipment use, wetness, droughtiness, and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Using equipment that has low-pressure tires increases traction and minimizes the rutting caused by the high content of sand in the soil.
- Using supplemental irrigation and seeding crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Using equipment that has wide tires or crawler-type equipment and harvesting trees when the soil is moist improve trafficability.
- Using tracked or low-pressure ground equipment minimizes rutting and root compaction during harvesting.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—fair; wetland wildlife—poor

Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of wetness and poor filtering capacity. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

88—Croatan and Johnston soils, frequently flooded

Setting

Landform: Flood plains
Landform position: Backswamps
Shape of areas: Long and narrow
Size of areas: 10 to more than 100 acres

Composition

Croatan and similar soils: 50 percent
Johnston and similar soils: 40 percent
Dissimilar soils: 10 percent

Typical Profile

Croatan

Surface layer:
0 to 16 inches—black muck

Subsurface layer:
16 to 50 inches—dark grayish brown fine sandy loam that has dark yellowish brown mottles

Substratum:
50 to 66 inches—grayish brown clay loam that has streaks of pinkish gray silt loam and strong brown and light yellowish brown mottles
66 to 85 inches—grayish brown clay loam that has yellowish red mottles

Johnston

Surface layer:
0 to 26 inches—black mucky loam

Substratum:
26 to 48 inches—gray sandy loam
48 to 68 inches—light gray sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Croatan—slow; Johnston—moderately rapid
Available water capacity: Medium
Seasonal high water table: Croatan—apparent, at the surface to a depth of 1.0 foot from November through May; Johnston—apparent, at the surface to a depth of 1.5 feet from November through May
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very high

Minor Components

Dissimilar soils:
- Areas of Hyde soils, which do not have a thick organic surface layer and have a subsoil with more clay than the subsoil of the Johnston soil
- Areas of moderately well drained Harleston soils on high knolls
- Areas of somewhat poorly drained Stough soils on high knolls

Similar soils:
- Scattered areas of Croatan soils that are ponded for very long periods
- Scattered areas of soils that have organic layers that are more than 50 inches thick

Land Use

Dominant uses: Woodland and wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Poorly suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- These soils are best reforested by managing for natural regeneration of hardwoods.
- Using low-pressure ground equipment helps to control rutting and the root damage caused by compaction.
- Harvesting timber during the summer and fall reduces the risk of damage from flooding.

- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—very poor; wetland wildlife—good
Management concerns: Equipment use, ponding, and flooding
Management measures and considerations:
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers and by creating openings in the canopy. The openings encourage the growth of seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the flooding, ponding, and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 7w

89—Udorthents

Setting

Landform: Uplands
Landform position: Summits, shoulders, and side slopes
Slope: 2 to 20 percent
Shape of areas: Rectangular
Size of areas: 3 to 20 acres

Composition

Udorthents: 95 percent
Dissimilar soils: 5 percent

Udorthents consist of earthy materials that have been moved, piled, and compacted as landfill. The original soil components are no longer recognizable. In most areas, the Udorthents are highly variable within a short distance and may be clayey, loamy, sandy, or stratified with various textures. Fragments of concrete, wood, metal, and other debris from construction activities are commonly within the matrix.

Soil Properties and Qualities

Depth class: Variable
Drainage class: Variable
Permeability: Variable
Available water capacity: Variable
Seasonal high water table: Variable
Shrink-swell potential: Variable
Flooding: None or rare
Content of organic matter in the surface layer: Variable
Other distinctive properties: Discontinuous layers, streaks, or pockets of variable texture

Minor Components

Dissimilar soils:
- Areas of Boykin, Harleston, Smithdale, Vancleave, and Wadley soils near the edges of mapped areas on uplands
- Areas of Bigbee soils near the edges of mapped areas on terraces

Land Use

Dominant uses: Urban development
Other uses: Unsuited to most other uses

Extensive reclamation efforts are required to make areas suitable for use as cropland, pasture, hayland, or woodland or for wildlife habitat. Onsite investigation and testing are needed to determine the suitability of areas of this unit for any use.

Interpretive Group

Land capability classification: 4s

90—Pits

Setting

Landform: Ridges, hillslopes, and terraces
Landform position: Summits, shoulder slopes, and side slopes
Shape of areas: Rectangular or rounded
Size of areas: 3 to 20 acres

Composition

Pits: 95 percent
Dissimilar soils: 5 percent

This map unit consists of open excavations from which the original soil and underlying material have been removed for use at another location. Typically, the remaining material consists of strata of sand, clay, and mixed earthy materials.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Variable
Permeability: Variable
Available water capacity: Variable
Seasonal high water table: Variable
Shrink-swell potential: Variable
Flooding: None or rare
Content of organic matter in the surface layer: Very low
Other distinctive properties: Discontinuous layers, streaks, and pockets of variable texture

Minor Components

Dissimilar soils:
- Areas of Boykin, Harleston, Smithdale, Vancleave, and Wadley soils near the edges of mapped areas on uplands
- Areas of sandy Bigbee soils near the edges of mapped areas on terraces
- Scattered small depressions that are intermittently ponded

Land Use

Dominant uses: Source of sand, clay, or fill material
Other uses: Unsuited to most other uses

Extensive reclamation efforts are required to make areas suitable for use as cropland, pasture, hayland, woodland, or home sites or for wildlife habitat. Onsite investigation and testing are needed to determine the suitability of areas of this unit for any use.

Interpretive Group

Land capability classification: 8s

95—Axis mucky sandy clay loam, frequently flooded

Setting

Landform: Tidal flats and marshes
Landform position: Low natural levees adjacent to stream channels (fig. 8)
Slope: 0 to 1 percent
Shape of areas: Irregular
Size of areas: 100 to more than 400 acres

Composition

Axis and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—very dark gray mucky sandy clay loam

Substratum:
6 to 16 inches—olive gray sandy loam
16 to 24 inches—gray sandy loam that has olive mottles
24 to 32 inches—greenish gray sandy loam that has olive mottles
32 to 40 inches—greenish gray sandy loam that has dark yellowish brown mottles

Figure 8.—An area of Axis mucky sandy clay loam, frequently flooded, on the natural levee adjacent to Walker Bayou. This soil generally supports a thick growth of black needlerush, which helps to protect the streambanks from erosion.

40 to 50 inches—dark greenish gray loam that has olive brown mottles
50 to 80 inches—light brownish gray sandy loam that has dark yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from January through December
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very high

Minor Components

Dissimilar soils:
- Areas of Handsboro soils, which have thick organic surface and subsurface layers, in slightly lower positions than those of the Axis soil

Land Use

Dominant uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Unsuited
Management concerns: This map unit is severely limited for timber production because of the flooding, wetness, and trafficability. A site that has better suited soils should be selected.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—poor; wetland wildlife—good
Management concerns: Equipment use, wetness, and flooding
Management measures and considerations:
- Wetland wildlife habitat can be improved by encouraging the growth of native seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the flooding and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 7w

96—Handsboro mucky silt loam, frequently flooded

Setting

Landform: Salt marshes (fig. 9)
Slope: 0 to 1 percent
Shape of areas: Oblong
Size of areas: 20 to 300 acres

Composition

Handsboro and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—olive gray mucky silt loam

Subsurface tier:
4 to 26 inches—dark olive gray muck

Bottom tier:
26 to 28 inches—very dark grayish brown sandy loam
28 to 46 inches—dark olive gray muck
46 to 52 inches—very dark gray muck
52 to 62 inches—very dark gray and very dark grayish brown sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained

Figure 9.—An area of Handsboro mucky silt loam, frequently flooded. This organic soil supports grasses, sedges, reeds, and rushes adapted to saltwater or brackish water and offers valuable habitat for many species of wetland wildlife.

Permeability: Moderate
Available water capacity: Low
Seasonal high water table: Apparent, from 1.0 foot above the surface to a depth of 0.5 foot from January through December
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very high
Other distinctive properties: The content of sulfur ranges from 0.75 to about 4.5 percent in subhorizons within 12 to 40 inches of the surface.

Minor Components

Dissimilar soils:
- Areas of Axis soils, which do not have thick organic surface layers, in slightly higher positions than those of the Handsboro soil

Similar soils:
- Scattered areas of organic soils that do not have thin strata of mineral material within a depth of 51 inches

Land Use

Dominant uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Unsuited
Management concerns: This map unit is severely limited for timber production because of restricted equipment use and limited seedling survival. A site that has better suited soils should be selected.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—very poor; wetland wildlife—poor
Management concerns: Equipment use, wetness, excess salt, and flooding
Management measures and considerations:
- Wetland wildlife habitat can be improved by encouraging the growth of native seed-producing grasses and forbs.

Urban development
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for urban development because of the flooding and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 8w

97—Maurepas muck, frequently flooded

Setting

Landform: Flood plains
Landform position: Depressions in backswamps
Slope: 0 to 1 percent
Shape of areas: Irregular
Size of areas: 20 to more than 150 acres

Composition

Maurepas and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface tier:
0 to 24 inches—very dark grayish brown muck

Subsurface tier:
24 to 36 inches—dark reddish brown muck

Bottom tier:
36 to 54 inches—very dark grayish brown muck

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Rapid
Available water capacity: High
Seasonal high water table: Apparent, from 1.0 foot above the surface to a depth of 0.5 foot from January through December
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Very high

Minor Components

Dissimilar soils:
- Areas of loamy Axis soils on natural levees adjacent to waterways
- Areas of Handsboro soils, which have thin layers of mineral material in the upper part of the profile, in positions similar to those of the Maurepas soil

Land Use

Dominant uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the flooding and wetness. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and the production of hay crops because of the flooding and wetness. A site that has better suited soils should be selected.

Woodland
Suitability: Unsuited

Management concerns: This map unit is severely limited for timber production because of restricted equipment use, limited seedling survival, and competition from undesirable plants. A site that has better suited soils should be selected.

Wildlife habitat

Potential to support habitat for: Openland wildlife and woodland wildlife—very poor; wetland wildlife—good (fig. 10)

Management concerns: Equipment use, wetness, and flooding

Management measures and considerations:

- Wetland wildlife habitat can be improved by encouraging the growth of native seed-producing grasses and forbs.

Urban development

Suitability: Unsuited

Management concerns: This map unit is severely limited as a site for urban development because of the flooding and wetness. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 8w

226—Bayou sandy loam, 0 to 1 percent slopes

Setting

Landform: Marine terraces

Landform position: Flats and swales

Shape of areas: Irregular

Size of areas: 10 to more than 100 acres

Figure 10.—An area of Maurepas muck, frequently flooded, in the backswamp of Black Creek. Such areas serve as valuable habitat for wetland wildlife and lessen the impacts of storm winds and flood waters on adjacent uplands.

Composition

Bayou and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsoil:
7 to 26 inches—gray sandy loam that has yellowish brown and pale brown mottles
26 to 40 inches—light brownish gray sandy loam that has brownish yellow mottles
40 to 50 inches—light brownish gray sandy clay loam that has brownish yellow and strong brown mottles
50 to 80 inches—light brownish gray clay loam that has brownish yellow and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Available water capacity: Medium
Seasonal high water table: Apparent, at the surface to a depth of 1.0 foot from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of somewhat poorly drained Escambia soils and moderately well drained Harleston soils on rises and knolls
- Areas of very poorly drained Johnston soils in drainageways

Similar soils:
- Scattered areas of poorly drained soils that have an accumulation of plinthite in the subsoil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and grain sorghum
Management concerns: Wetness and fertility
Management measures and considerations:
- Installing a drainage system that includes open ditches, perforated tile, or land shaping improves productivity.
- Restricting tillage to periods when the soil is dry minimizes clodding and crusting.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bahiagrass and improved bermudagrass

Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Well maintained drainageways and ditches help to remove excess water.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Suited
Management concerns: Equipment use, seedling survival, and competition from undesirable plants
Management measures and considerations:
- Restricting the use of standard wheeled and tracked equipment to dry periods minimizes rutting and soil compaction.
- Using low-pressure ground equipment minimizes rutting and the damage caused to tree roots by compaction.
- Planting seedlings on raised beds helps to establish the seedlings and increases the seedling survival rate.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.

Wildlife habitat
Potential to support habitat for: Openland wildlife and wetland wildlife—fair; woodland wildlife—poor
Management concerns: Equipment use and wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.
- Using an artificial drainage system helps to remove excess surface water.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of the restricted permeability and wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 4w

328—Harleston fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Terraces
Landform position: Summits
Shape of areas: Irregular
Size of areas: 20 to 100 acres

Composition

Harleston and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
6 to 14 inches—pale brown sandy loam

Subsoil:
14 to 24 inches—light yellowish brown sandy loam
24 to 32 inches—yellowish brown loam that has light brownish gray and yellowish red mottles
32 to 48 inches—yellowish brown loam and sandy clay loam with light brownish gray and strong brown mottles
48 to 62 inches—multicolored red, gray, yellowish brown, and strong brown sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of well drained Latonia soils in positions similar to those of the Harleston soils
- Areas of somewhat poorly drained Ocilla soils in shallow swales
- Areas of sandy Wadley soils on knolls
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of soils that have a subsoil with more clay than the subsoil of the Harleston soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Urban land, cropland, and pasture

Cropland
Suitability: Well suited
Commonly grown crops: Corn, cotton, soybeans, and grain sorghum
Management concerns: Wetness, droughtiness, and fertility
Management measures and considerations:
- Delaying spring planting minimizes the clodding and rutting that occurs if equipment is used when the soil is wet.
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase the amount of available water, decrease the extent of crusting, and improve the fertility of the soil.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of nutrients to plants and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness and fertility
Management measures and considerations:
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Constructing structures on the highest part of the landscape and installing an artificial drainage system reduce the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

329—Harleston fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Terraces
Landform position: Side slopes and narrow ridges
Shape of areas: Irregular
Size of areas: 20 to 50 acres

Composition

Harleston and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

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

Subsurface layer:
6 to 14 inches—pale brown sandy loam

Subsoil:
14 to 24 inches—light yellowish brown sandy loam
24 to 32 inches—yellowish brown loam that has light brownish gray and yellowish red mottles
32 to 48 inches—yellowish brown loam and sandy clay loam with light brownish gray and strong brown mottles
48 to 62 inches—multicolored red, gray, yellowish brown, and strong brown sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Moderate
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of well drained Latonia soils in positions similar to those of the Harleston soils

- Areas of Harleston soils that have slopes of less than 2 percent or more than 5 percent
- Areas of somewhat poorly drained Ocilla soils in shallow swales and around the heads of drainageways
- Areas of poorly drained Smithton soils in drainageways
- Areas of sandy Wadley soils on knolls and shoulder slopes

Similar soils:
- Scattered areas of soils that have a subsoil with more clay than the subsoil of the Harleston soil

Land Use

Dominant uses: Woodland
Other uses: Urban land, cropland, and pasture

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, and grain sorghum
Management concerns: Erosion, droughtiness, and fertility
Management measures and considerations:
- Using a resource management system that includes terraces and diversions, stripcropping, contour tillage, conservation tillage, and crop residue management reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase crop production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erosion, droughtiness, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Proper stocking rates, pasture rotation, timely deferment of grazing, and restricted use during wet periods minimize compaction, maintain productivity, and help to keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of

vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting appropriate vegetation, maintaining the existing plant cover, or promoting the natural establishment of desirable plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Constructing dwellings on raised, well-compacted fill material reduces the risk of damage from wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2e

330—Harleston fine sandy loam, 5 to 8 percent slopes

Setting

Landform: Marine terraces
Landform position: Side slopes and backslopes
Shape of areas: Irregular
Size of areas: 20 to 50 acres

Composition

Harleston and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

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

Subsurface layer:
6 to 14 inches—pale brown sandy loam

Subsoil:
14 to 24 inches—light yellowish brown sandy loam
24 to 32 inches—yellowish brown loam that has light brownish gray and yellowish red mottles
32 to 48 inches—yellowish brown loam and sandy clay loam with light brownish gray and strong brown mottles

48 to 62 inches—multicolored red, gray, yellowish brown, and strong brown sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: Medium
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of well drained Benndale soils on knolls and narrow ridges
- Areas of Harleston soils that have slopes of less than 5 percent or more than 8 percent
- Areas of poorly drained Smithton soils in drainageways
- Areas of somewhat poorly drained Stough soils on toeslopes
- Areas of sandy Wadley soils on shoulder slopes

Similar soils:
- Scattered areas of soils that have a subsoil with more clay than the subsoil of the Harleston soil

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Pasture

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, soybeans, wheat, and grain sorghum
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Using a resources management system that includes terraces and diversions, stripcropping, contour farming, conservation tillage, crop residue management, and soil conserving crops in rotation reduces the hazard of erosion, helps to control surface runoff, and maximizes rainfall infiltration.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Erodibility, droughtiness, and fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the rate of germination.
- Using rotational grazing and implementing a well planned schedule of clipping and harvesting help to maintain the pasture and increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control plant competition.
- Reseeding all disturbed areas with adapted grasses and legumes reduces the hazard of erosion and the siltation of streams.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Suited
Management concerns: Slope and wetness
Management measures and considerations:
- Structures can be designed to conform to the natural slope.
- Grading or land shaping prior to construction minimizes the damage caused by surface flow of water and reduces the hazard of erosion.
- Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness and slope
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves the performance of septic systems.
- Installing distribution lines on the contour improves the performance of septic tank absorption fields.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 3e

365—Duckston sand, 0 to 2 percent slopes

Setting

Landform: Barrier islands
Landform position: Flats and depressions between dunes

Shape of areas: Oblong
Size of areas: 5 to 20 acres

Composition

Duckston and similar soils: 95 percent
Dissimilar soils: 5 percent

Typical Profile

Surface layer:
0 to 13 inches—very dark gray sand

Substratum:
13 to 21 inches—gray fine sand
21 to 70 inches—light gray fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very rapid
Available water capacity: Low
Seasonal high water table: Apparent, at the surface to a depth of 0.5 foot from January through December
Shrink-swell potential: Low
Flooding: Rare
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Medium

Minor Components

Dissimilar soils:
- Areas of excessively drained Newhan soils and moderately well drained Corolla soils on dunes

Similar soils:
- Scattered areas of soils that have thin strata of organic material in the upper part of the substratum

Land Use

Dominant uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of wetness, droughtiness, and the effects of salt spray. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and production of hay crops because of wetness, droughtiness, and the effects of salt spray. A site that has better suited soils should be selected.

Woodland
Suitability: Unsuited
Management concerns: This map unit is severely limited for timber production because of wetness, trafficability, and the effects of salt spray. A site that has better suited soils should be selected.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—very poor; wetland wildlife—poor
Management concerns: Equipment use, wetness, droughtiness, salt spray, and fertility
Management measures and considerations:
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for dwellings because of wetness and flooding. A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of wetness. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: 7w

386—Newhan-Corolla complex, rolling

Setting

Landform: Barrier islands
Landform position: Newhan—dunes; Corolla—lower slopes on dunes and on flats (fig. 11)

Figure 11.—An area of Newhan-Corolla complex, rolling, on Horn Island. These sandy soils support a sparse vegetative cover of oak brush and scattered pines. The vegetation helps to stabilize the dunes and offers protection from wind erosion and water erosion. The vegetation also offers valuable habitat for migrating songbirds and other wildlife.

Slope: Newhan—5 to 20 percent; Corolla—0 to 6 percent
Shape of areas: Irregular
Size of areas: 20 to more than 50 acres

Composition

Newhan and similar soils: 55 percent
Corolla and similar soils: 40 percent
Dissimilar soils: 5 percent

Typical Profile

Newhan

Surface layer:
0 to 2 inches—dark grayish brown fine sand

Substratum:
2 to 48 inches—light brownish gray fine sand
48 to 66 inches—light brownish gray sand
66 to 80 inches—gray sand

Corolla

Surface layer:
0 to 5 inches—grayish brown fine sand

Substratum:
5 to 16 inches—light olive brown fine sand
16 to 28 inches—grayish brown fine sand that has strong brown mottles
28 to 46 inches—light brownish gray fine sand that has strong brown mottles
46 to 80 inches—gray fine sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Newhan—excessively drained; Corolla—moderately well drained
Permeability: Very rapid
Available water capacity: Very low
Seasonal high water table: Newhan—at a depth of more than 6.0 feet; Corolla—apparent, at a depth of 1.5 to 3.0 feet from January through December
Shrink-swell potential: Low
Flooding: Rare
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of poorly drained Duckston soils in depressions between dunes

Similar soils:
- Scattered areas of soils that have thin layers of organic matter on the surface or within the profile

Land Use

Dominant uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: This map unit is severely limited for crop production because of the complex slopes, erodibility, restricted equipment use, droughtiness, and the effects of salt spray. A site that has better suited soils should be selected.

Pasture and hayland
Suitability: Unsuited
Management concerns: This map unit is severely limited for pasture and hayland because of the complex slopes, erodibility, restricted equipment use, droughtiness, and the effects of salt spray. A site that has better suited soils should be selected.

Woodland
Suitability: Unsuited
Management concerns: This map unit is severely limited for woodland because of restricted equipment use, droughtiness, and the effects of salt spray. A site that has better suited soils should be selected.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife and wetland wildlife—very poor
Management concerns: Droughtiness
Management measures and considerations:
- Openland wildlife habitat can be enhanced by planting or encouraging the growth of native plant species that provide food and cover for wildlife and help to stabilize the dunes.

Dwellings
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for dwellings because of flooding and the instability of the dunes. A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for septic tank absorption fields because of poor filtering capacity in the Newhan and Corolla soils and wetness in the Corolla soil. The stability of the dunes is also a limitation. The local Health Department can be contacted for additional guidance.

Interpretive Group

Land capability classification: Newhan—8s; Corolla—7s

387—Beaches

Setting

Landform: Barrier islands
Landform position: Beaches
Slope: 0 to 3 percent
Shape of areas: Long and narrow
Size of areas: 10 to 40 acres

Composition

Beaches: 95 percent
Dissimilar soils: 5 percent

This miscellaneous land type consists of narrow strips of tide-washed sand on the coast and on barrier islands. Beaches are subject to daily flooding by fluctuating tides and wave action. The shape and slope of beaches commonly changes due to storm surges and wave action. Most areas of beaches consist of thick deposits of thinly stratified, fine quartz sand. Common or many fragments of shells and dark sand grains are throughout the profile in most areas.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very rapid
Available water capacity: Very low
Seasonal high water table: Apparent, at the surface to a depth of 3.0 feet from January through December
Shrink-swell potential: Low
Flooding: Frequent
Hazard of water erosion: Severe
Content of organic matter in the surface layer: Very low

Minor Components

Dissimilar soils:
- Areas of excessively drained Newhan soils and moderately well drained Corolla soils on dunes

Similar soils:
- Scattered areas of Duckston soils that are not subject to frequent flooding

Land Use

Dominant uses: Recreation

Other uses: Wildlife habitat

Beaches are unsuited for most uses because of daily flooding by tidal action, the effects of salt spray, and instability due to wave action. A site that has better suited soils should be selected.

Interpretive Group

Land capability classification: 8w

388—Latonia loamy sand, 0 to 2 percent slopes

Setting

Landform: Marine terraces
Landform position: Flat and slightly convex slopes
Shape of areas: Irregular
Size of areas: 20 to 100 acres

Composition

Latonia and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loamy sand

Subsurface layer:
6 to 13 inches—yellowish brown sandy loam

Subsoil:
13 to 33 inches—yellowish brown sandy loam
33 to 44 inches—brownish yellow fine sandy loam

Substratum:
44 to 51 inches—brownish yellow loamy sand that has very pale brown and yellowish red mottles
51 to 54 inches—very pale brown loamy sand that has yellowish brown mottles
54 to 80 inches—white loamy sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Medium
Seasonal high water table: At a depth of more than 6.0 feet
Shrink-swell potential: Low
Flooding: None
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of moderately well drained Columbus and Harleston soils in slightly lower, less convex positions than those of the Latonia soil
- Areas of poorly drained, sandy Leon soils in swales
- Areas of somewhat poorly drained, sandy Ocilla soils in swales
- Areas of poorly drained Smithton soils in drainageways

Similar soils:
- Scattered areas of Latonia soils that have a surface layer of sandy loam

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland and urban land

Cropland
Suitability: Well suited
Commonly grown crops: Corn, cotton, soybeans, and grain sorghum
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Conservation tillage, winter cover crops, crop residue management, and crop rotations that include grasses and legumes increase available water capacity, minimize crusting, and improve fertility.
- Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase productivity.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Droughtiness and fertility
Management measures and considerations:
- Using supplemental irrigation and seeding species that are adapted to droughty conditions increase production.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: No significant limitations affect woodland management.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Poor filtering capacity
Management measures and considerations:
- The soil readily absorbs, but may not adequately filter, effluent. Measures that improve the filtering capacity should be considered.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2s

528—Columbus loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landform: Low stream terraces
Landform position: Flat and slightly convex slopes
Shape of areas: Irregular
Size of areas: 10 to more than 200 acres

Composition

Columbus and similar soils: 90 percent
Dissimilar soils: 10 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 16 inches—yellowish brown loam

Subsoil:
16 to 30 inches—dark yellowish brown loam that has light brownish gray and yellowish brown mottles

30 to 48 inches—yellowish brown loam that has gray, red, yellowish red, and light brownish gray mottles
48 to 52 inches—yellowish brown loam that has dark brown and light brownish gray mottles

Substratum:
52 to 64 inches—strong brown sandy loam that has gray and light yellowish brown mottles
64 to 82 inches—light gray loamy sand and sand with light yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Apparent, at a depth of 2.0 to 3.0 feet from December through April
Shrink-swell potential: Low
Flooding: Occasional
Hazard of water erosion: Slight
Content of organic matter in the surface layer: Low

Minor Components

Dissimilar soils:
- Areas of Harleston and Latonia soils, which have a subsoil with less clay in the upper part than the subsoil of the Columbus soil, on the slightly higher knolls
- Areas of somewhat poorly drained Johns soils in shallow swales
- Areas of sandy Bigbee soils on high knolls
- Areas of very poorly drained Johnston soils in narrow drainageways

Similar soils:
- Scattered areas of Columbus soils that have a surface layer of sandy loam

Land Use

Dominant uses: Woodland and wildlife habitat
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and grain sorghum
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Installing and maintaining an artificial drainage system reduces wetness and improves productivity.
- Although most of the flooding occurs during the winter and spring, crop loss can occur during the growing season.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and improved bermudagrass
Management concerns: Wetness, flooding, and fertility
Management measures and considerations:
- Although most of the flooding occurs during the winter and spring, livestock and hay may be damaged during any time of the year.

- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- Applying lime and fertilizer on the basis of soil testing increases the availability of plant nutrients and maximizes productivity.

Woodland
Suitability: Well suited
Management concerns: Equipment use and competition from undesirable plants
Management measures and considerations:
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from unwanted plants.
- Logging when the soil has the proper moisture content helps to prevent rutting in the surface layer and the root damage caused by compaction.

Wildlife habitat
Potential to support habitat for: Openland wildlife and woodland wildlife—good; wetland wildlife—poor
Management concerns: Flooding
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: This map unit is severely limited as a site for dwellings because of the flooding. A site that has better suited soils should be selected.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Wetness, restricted permeability, and flooding
Management measures and considerations:
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table and increasing the size of the field improve the performance of septic systems.
- Installing distribution lines during dry periods helps to control smearing and sealing of trench walls.
- The local Health Department can be contacted for additional guidance regarding sanitary facilities.

Interpretive Group

Land capability classification: 2w

Use and Management of the Soils

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

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

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

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

Contractors can use this survey to locate sources of 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

Elvert Cole, acting resource conservationist, helped prepare this section.

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

Planners of management systems for individual fields or farms should consider the detailed information given in the 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.

The soils in Jackson County vary considerably in use, suitability, and management. Some management practices, however, are applicable to all of the soils. Some areas in the county have soils that can produce high yields of cultivated crops. If well managed, these areas generally have a plow layer that is easy to work and has good tilth. Most of the soils in the county are low in natural fertility and are strongly acid or very strongly acid. All of the soils except the very sandy ones tend to pack and crust when bare. Drainage can be improved by constructing canals and W-type or V-type ditches. Fertilizer and lime are needed for most of the crops grown in the county because most of the soils are acid and deficient in nitrogen, phosphorus, and potassium. A soil test is recommended for proper utilization of lime and fertilizer and for maximum growth of all crops and other plants.

Jackson County has about 7,234 acres of cropland and 25,376 acres of pasture, hayland, and noncultivated crops. The county has 150,200 acres of woodland and has 1,316 acres of cropland that has been converted to trees under the Conservation Reserve Program. The acreage of land under cultivation has decreased tremendously due to encroachment from urban expansion. Depressed market values for grain and livestock have forced many land users to seek other ways to profit from agricultural land. Demand for secluded homesites and an increased interest in the gaming industry have also contributed to the loss of farmland. Common crops are cotton, corn, soybeans, wheat, and grain sorghum. Recently, an increased acreage has been planted to blueberries, sweet corn, and watermelons. Bahiagrass and common bermudagrass are commonly grown grasses in the county.

Jackson County has good potential for increased food production. The hazard of erosion on most of the soils in Jackson County is slight because 85 percent of the county area is forested. Erosion is a hazard where slopes are more than 2 percent. Benndale, Malbis, and Bama soils are examples of soils that have slopes of more than 2 percent and are subject to sheet and rill erosion.

Loss of the surface layer through erosion is damaging for several reasons. Productivity is reduced as the surface layer is lost and part of the subsoil is incorporated into the plow layer. Loss of the surface layer is especially damaging on soils that have a natural restrictive layer limiting the depth of the root zone in the subsoil. Erosion on farmland can result in sediment moving into streams. Control of erosion minimizes the pollution of streams by sediment and maintains the quality of water for municipal use, recreational use, and use by fish and wildlife.

Erosion control practices provide a protective cover, reduce the volume and velocity of runoff, and increase the rate of water infiltration. A cropping system that keeps a vegetative cover on the soil can keep soil losses to amounts that do not reduce the productive capacity of the soils. Including legumes and grass-forage crops in the cropping system can minimize erosion on sloping land, provide nitrogen to the soil, and improve tilth.

A system that uses minimum tillage and leaves crop residue on the surface increases the rate of water infiltration and reduces the hazards of runoff and erosion. These practices can be adapted to most of the soils in the survey area. No-till farming can be used on some soils that have unfavorable topographic conditions for terracing or contour farming. Soybeans and corn planted in heavy residue can help to control erosion on sloping cropland.

Terraces and diversions reduce the length of slope and help to control runoff and erosion. They are most practical on deep, well drained soils that have fairly uniform slopes. Examples include Bama, Benndale, and Malbis soils. Grassed waterways or underground tile outlets to safely drain excess water are essential where terraces and diversions are installed.

Contour farming helps to control erosion in cultivated areas. Contour farming is well suited to soils that have smooth, uniform slopes. Examples include Bama, Benndale, Eustis, and Malbis soils. Some of the coastal soils in Jackson County are naturally too wet for the production of crops and pasture plants.

Information regarding the design of erosion-control measures for each kind of soil is available at the local office of 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 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

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

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, 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 table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops (USDA–SCS, 1961). Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

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

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

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

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

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

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

Prime Farmland

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

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 8 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 153,000 acres in the survey area, or nearly 32 percent of the total acreage, meets the soil requirements for prime farmland. Scattered areas are throughout the county, mainly in associations 1, 3, 4, and 10, which are described under the heading “General Soil Map Units.”

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

The map units in the survey area that are considered prime farmland are listed in table 6. This list does not constitute a recommendation for a particular land use. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

Forestland Management and Productivity

Alan Holditch, state staff forester, Natural Resources Conservation Service, helped prepare this section.

A great part of the original vegetation of Jackson County was pine, chiefly longleaf pine *(Pinus palustris)* and slash pine *(Pinus elliottii)*. Longleaf pine, commonly called yellow pine by local residents, was the most common species. It grew everywhere except on the first bottoms and in tidal marshes. Both pines and hardwoods grew on the uplands and terraces, and hardwoods grew on the bottom lands.

Jackson County’s virgin forests provided material for the naval stores industry and for logging and sawmilling operations. Timber accounted for the growth of towns and, in part, for the development of seaport facilities and railroad facilities. After the Civil War, timber was the principal source of income.

Turpentine production was an important industry before 1906, when a severe storm destroyed large numbers of pine trees. Only a few tracts of the virgin stands remained after the storm. Second growth stands provided material for the lumber industry during World War II and the post-war period.

The future use of the forests in Jackson County will be determined to a great extent by the ownership objectives of the private land owners and the management of the public forestlands. Proximity to the Gulf Coast creates pressure for residential development, recreational uses, and other uses that compete with commercial timber production (USDA, 1978a).

Approximately 359,700 acres, or about 77 percent of the land area in Jackson County, is commercial forestland. About 150,200 acres of this commercial forestland is owned by private individuals and farmers, 125,100 acres is owned by the forest industry and corporations, and 84,400 acres is public land, owned by the state or federal government (USDA, 1978b).

The forest types of Jackson County are in three major regions. The first region includes upland sites that have well drained soils. It consists primarily of the longleaf-slash pine forest type (66,700 acres). The second region includes the broad terraces along the Pascagoula River. The predominant forest type in this region is loblolly-shortleaf pine (37,600 acres). The oak-pine forest type (90,200 acres) and the oak-hickory forest type (43,800 acres) occur in both of the first two regions. The main vegetation in these regions includes longleaf pine *(Pinus palustris)*, slash pine *(Pinus elliottii)*, shortleaf pine *(Pinus echinata)*, loblolly pine *(Pinus taeda)*, sweetgum *(Liquidambar styraciflua)*, black cherry *(Prunus serotina)*, common persimmon *(Diospyros virginiana)*, southern magnolia *(Magnolia grandiflora)*, sweetbay *(Magnolia virginiana)*, sassafras *(Sassafras albidum)*, red maple *(Acer rubrum)*, yellow poplar *(Liriodendron tulipifera)*, cherrybark oak *(Quercus pagodifolia)*, Shumard oak *(Quercus shumardii)*, white oak *(Quercus alba)*, blackjack oak *(Quercus marilandica)*, post oak *(Quercus stellata)*, mockernut hickory *(Carya tomentosa),* and pignut hickory *(Carya glabra)*.

The third region includes the flood plains along the Pascagoula River, Black Creek, and Red Creek. The major forest type is oak-gum-cypress (115,200 acres). The species on these bottomland sites include green ash *(Fraxinus pennsylvanica)*, bald cypress *(Taxodium distichum)*, pond cypress *(Taxodium ascendens)*, Atlantic white cedar *(Chamaecyparis thyoides)*, water tupelo *(Nyssa aquatica)*, spruce pine *(Pinus glabra)*, sweetgum *(Liquidambar styraciflua)*, water oak *(Quercus nigra)*, swamp chestnut oak *(Quercus michauxii)*, laurel oak *(Quercus laurifolia)*, and red maple *(Acer rubrum)*.

Climate and soils are the most important environmental factors that influence the growth and frequency of occurrence of trees. Soil is the medium in which a tree is anchored, and it supplies the tree with nutrients and moisture. Soil characteristics, such as chemical composition, texture, structure, depth, and position, affect the growth of a tree to the extent to which they affect the supply of moisture and nutrients. Slope position strongly influences species composition in a forest. Moisture-loving species, such as sweetgum and yellow poplar, thrive on moderately moist, well drained, loamy soils on lower to middle slopes and in areas adjoining streams. Such species as oak, hickory, and pine grow well on soils on middle slopes and ridges.

Good forest management practices help to maintain or improve soil productivity and water quality. Forest management activities, such as timber harvesting and site preparation, have the greatest potential for affecting soil productivity and water quality. Careless application of these practices can cause erosion, deplete nutrients, and result in soil compaction. Site-specific forest management practices that account for topography, time, natural site fertility, and the hazard of erosion help to prevent damage to soil and water resources.

This soil survey can be used by woodland managers planning ways to increase the productivity of forestland. Some soils respond better to applications of fertilizer than others, and some are more susceptible to landslides and erosion after roads are built and timber is harvested. Some soils require special reforestation efforts. In the section “Detailed Soil Map Units,” the description of each map unit in the survey area suitable for timber includes information about productivity, limitations for harvesting timber, and management concerns for producing timber. The common forest understory plants also are listed.

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

Forestland Productivity

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

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

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

Forestland Management

In table 8, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified 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 (http://soils.usda.gov).

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 9a and 9b 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 9a and 9b 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 and depth to a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Wetness is the main concern 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, and permeability. The soil properties that affect the growth of plants are depth to a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Wetness is the main concern 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, and permeability. 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 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 slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to a cemented pan; the available water capacity in the upper 40 inches; the content of salts or sodium; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, 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

David R. Thomas, area wildlife biologist, and Glynda Clardy, state wildlife biologist, Natural Resources Conservation Service, helped prepare this section.

Jackson County has a large and varied population of wildlife. White-tailed deer, turkey, and squirrels inhabit the wooded areas. Bobwhite quail, doves, cottontail rabbits, meadowlarks, lark sparrows, and many types of songbirds live in the farmed areas where food and cover are available. Inhabiting the marshes and other wetlands are wood ducks, mallards, rails, shorebirds, coots, cranes, snipe, and occasionally Canadian geese. These areas also support muskrat, mink, nutria, otter, raccoon, alligators, turtles, and crayfish.

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

In table 10, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

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

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

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

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 bahiagrass, panicgrass, clover, ryegrass, and annual and bush lespedezas.

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. Native grasses, such as switchgrass, that grow in moist sites are favorable to many species of wildlife. Examples of other wild herbaceous plants are bluestem, goldenrod, beggarweed, perennial lespedeza, wild bean, and pokeberry.

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, yellow poplar, black cherry, sweetgum, hawthorn, flowering dogwood, hickory, blackberry, and red maple. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are bicolor lespedeza, mayhaw, 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 bald cypress, red cedar, longleaf pine, loblolly pine, and slash pine.

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, and slope. Examples of wetland plants are smartweed, wild millet, cattails, water lilies, rushes, sedges, and reeds.

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

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

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, turtles, alligators, muskrat, mink, otter, raccoon, 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, 2003) 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).

2 Kinston, Chastain, and Mantachie soils, frequently flooded
3 Atmore loam, 1 to 3 percent slopes
12 Arat mucky silt loam, 0 to 1 percent slopes, frequently flooded
13 Daleville silt loam, 0 to 1 percent slopes
14 Daleville loam, ponded
22 Myatt loam, 0 to 1 percent slopes, occasionally flooded
24 Hyde silt loam
26 Smithton loam, 0 to 1 percent slopes, occasionally flooded
76 Nugent and Jena soils, frequently flooded
85 Leon mucky sand, 0 to 1 percent slopes
88 Croatan and Johnston soils, frequently flooded
95 Axis mucky sandy clay loam, frequently flooded
96 Handsboro mucky silt loam, frequently flooded
97 Maurepas muck, frequently flooded
226 Bayou sandy loam, 0 to 1 percent slopes
365 Duckston sand, 0 to 2 percent slopes

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.

4 Lenoir silt loam, 0 to 1 percent slopes
32 Escambia very fine sandy loam, 0 to 2 percent slopes
33 Escambia very fine sandy loam, 2 to 5 percent slopes

Engineering

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

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

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

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

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth of soil, 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 11a and 11b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

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

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

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 of soil, depth to a cemented pan, and hardness of a cemented pan.

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 of soil, depth to a cemented pan, and hardness of a cemented pan.

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 of soil, depth to a cemented pan, hardness of a cemented pan, depth to a water table, ponding, flooding, 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 of soil, depth to a cemented pan, hardness of a cemented pan, 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 of soil, depth to a cemented pan, the available water capacity in the upper 40 inches, the content of salts or sodium, and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 12a and 12b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

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 a cemented pan, and flooding affect absorption of the effluent. 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 of soil, depth to a cemented pan, flooding, and content of organic matter.

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

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope and cemented pans can cause construction problems. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over 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 of soil, depth to a cemented pan, depth to a water table, ponding, slope, flooding, texture, 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.

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, slope, depth to 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 13a and 13b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 13a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

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

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, depth to 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 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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.

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, plasticity, and compaction characteristics.

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

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

Engineering Index Properties

Table 15 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

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

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

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

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

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

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

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

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

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

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

Physical Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 16, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

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

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

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

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

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

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 16, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

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

Erosion factors are shown in table 16 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

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 as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

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 Properties

Table 17 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

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

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

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

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. 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 18 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

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

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

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

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

The four hydrologic soil groups are:

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

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

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

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

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 19 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 19 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 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.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 20 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

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

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, siliceous, subactive, thermic Typic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

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, 2003). 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.

Arat Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Slow
Parent material: Semifluid loamy sediments
Landform: Flood plains
Landform position: Depressions in backswamps
Slope: 0 to 1 percent
Taxonomic class: Fine-silty, siliceous, superactive, nonacid, thermic Typic Hydraquents

Commonly Associated Soils

Chastain, Mantachie, and Maurepas soils are commonly associated with the Arat series.

- The poorly drained Chastain soils are in positions similar to those of the Arat soils.
- The somewhat poorly drained Mantachie soils are on natural levees at the slightly higher elevations.
- The Maurepas soils are in positions similar to those of the Arat soils and have a thick histic epipedon.

Typical Pedon

Arat mucky silt loam, 0 to 1 percent slopes, frequently flooded; about 1,200 feet south and 1,600 feet west of the northeast corner of sec. 4, T. 6 S., R. 6 W.

Oi—4 to 0 inches; partially decomposed leaves, stems, and wood.
A—0 to 12 inches; very dark gray (10YR 3/1) mucky silt loam; massive; extremely fluid; flows easily between fingers when squeezed; about 20 percent herbaceous fibers; slightly acid; clear smooth boundary.
Cg1—12 to 34 inches; dark grayish brown (2.5Y 4/2) silty clay loam; massive; very fluid; flows easily between fingers when squeezed; about 50 percent partially decomposed wood fibers; slightly acid; clear smooth boundary.
Cg2—34 to 59 inches; dark grayish brown (2.5Y 4/2) silty clay loam; massive; very fluid; flows easily between fingers when squeezed; about 50 percent partially decomposed wood fragments; slightly acid; clear smooth boundary.
Cg3—59 to 84 inches; grayish brown (2.5Y 5/2) silty clay loam; massive; very fluid; flows easily between fingers when squeezed; about 65 percent partially decomposed wood fragments; slightly acid.

Range in Characteristics

A horizon:
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2
Texture—mucky silt loam or mucky silty clay loam
Reaction—strongly acid to slightly acid

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, chroma of 1 or 2

Texture—silty clay loam, mucky silty clay loam, or silt loam
Reaction—moderately acid to slightly alkaline
Coarse fragments—50 to 95 percent, by volume, logs and woody fragments

Atmore Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landform: Marine terraces
Landform position: Flats, swales, and toeslopes
Slope: 1 to 3 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleaquults

Commonly Associated Soils

Escambia, Smithton, and Vancleave soils are commonly associated with the Atmore series.

- The somewhat poorly drained Escambia soils are in the slightly higher, more convex positions.
- The Smithton soils are in drainageways at the slightly lower elevations and do not have significant accumulations of plinthite in the subsoil.
- The moderately well drained Vancleave soils are in the slightly higher positions.

Typical Pedon

Atmore loam, 1 to 3 percent slopes; about 2.0 miles southeast of Dantzler; 600 feet south of Wire Road; about 1,400 feet south and 1,900 feet east of the northwest corner of sec. 24, T. 4 S., R. 9 W.

Ap—0 to 4 inches; dark gray (10YR 4/1) loam; weak fine granular structure; friable; many fine and medium roots; common faint streaks of very dark gray (10YR 3/1) loam; very strongly acid; abrupt wavy boundary.

Eg—4 to 14 inches; gray (10YR 5/1) silt loam; weak fine granular structure; friable; common fine and medium roots; common fine distinct brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; clear irregular boundary.

B/E—14 to 35 inches; 80 percent gray (10YR 6/1) loam (B); weak coarse subangular blocky structure; firm; common fine and medium roots; 20 percent grayish brown (10YR 5/2) silt loam (E) in seams between peds; weak coarse subangular blocky structure; very friable; 5 percent rounded ironstone nodules; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btvg1—35 to 48 inches; gray (10YR 5/1) loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; about 20 percent brittle and compact; common faint clay films on faces of peds; about 4 percent rounded ironstone nodules; about 7 percent nodular plinthite; many medium distinct yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btvg2—48 to 58 inches; 45 percent gray (10YR 6/1), 30 percent reddish yellow (7.5YR 6/8), 15 percent yellowish brown (10YR 5/6), and 10 percent light brownish gray (10YR 6/2) loam; weak coarse prismatic structure; firm; about 25 percent brittle and compact; common faint clay films on faces of peds; about 5 percent rounded ironstone nodules; about 10 percent nodular plinthite; areas of yellowish brown and reddish yellow are masses of iron accumulation; areas of gray and light brownish gray are iron depletions; very strongly acid; clear wavy boundary.

Btg—58 to 71 inches; light brownish gray (2.5Y 6/2) clay loam; weak coarse prismatic structure; friable; common faint clay films on faces of peds; about 5 percent rounded ironstone nodules; few fine prominent yellowish red (5YR 5/6) and many medium prominent brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Cg—71 to 81 inches; light olive gray (5Y 6/2) sandy loam; massive; friable; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Extremely acid to strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 1 or 2

Eg horizon and E part of B/E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—loam, silt loam, or sandy loam

Btvg and Btg horizons and B part of B/E horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—loam, sandy loam, sandy clay loam, or clay loam

Cg horizon: (where present)
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam, sandy loam, or loam

Axis Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landform: Tidal flats and marshes
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, mixed, superactive, nonacid, thermic Typic Sulfaquents

Commonly Associated Soils

Bayou, Handsboro, Maurepas, and Quitman soils are commonly associated with the Axis series.

- The poorly drained Bayou soils and somewhat poorly drained Quitman soils are on terraces adjacent to the Axis soils.
- The Handsboro and Maurepas soils are in the slightly lower positions and have a thick histic epipedon.

Typical Pedon

Axis mucky sandy clay loam, frequently flooded; in a marsh east of Bangs Lake; about 4,000 feet south and 3,800 feet west of the northeast corner of sec. 12, T. 8 S., R. 5 W.

A—0 to 6 inches; very dark gray (5Y 3/1) mucky sandy clay loam; massive; common medium and coarse roots; neutral; clear smooth boundary.
Cg1—6 to 16 inches; olive gray (5Y 5/2) sandy loam; massive; common medium and coarse roots; neutral; clear wavy boundary.
Cg2—16 to 24 inches; gray (5Y 5/1) sandy loam; massive; common medium and coarse roots; common fine distinct olive (5Y 5/4) masses of iron accumulation; slightly alkaline; clear wavy boundary.
Cg3—24 to 32 inches; greenish gray (5GY 5/1) sandy loam; massive; common medium roots; few medium distinct olive (5Y 5/4) masses of iron accumulation; slightly alkaline; clear wavy boundary.
Cg4—32 to 40 inches; greenish gray (5BG 5/1) sandy loam; massive; common medium roots; few fine prominent dark yellowish brown (10YR 3/4) masses of iron accumulation; slightly alkaline; clear wavy boundary.
Cg5—40 to 50 inches; dark greenish gray (5BG 4/1) loam; massive; common medium distinct olive brown (2.5Y 4/4) masses of iron accumulation; slightly alkaline; gradual wavy boundary.
Cg6—50 to 80 inches; light brownish gray (2.5Y 6/2) sandy loam; massive; common fine distinct dark yellowish brown (10YR 3/4) masses of iron accumulation; slightly alkaline.

Range in Characteristics

Reaction: Slightly acid to moderately alkaline throughout the profile

A horizon:
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2

Cg horizon:
Color—hue of 2.5Y to 5GY, value of 4 to 6, and chroma of 1 or 2
Texture—loam, sandy loam, sandy clay loam, or silt loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown or olive

Bama Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landform: Ridges
Landform position: Summits and side slopes
Slope: 0 to 8 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Typic Paleudults

Commonly Associated Soils

Benndale, Malbis, Saucier, and Vancleave soils are commonly associated with the Bama series.

- The Benndale soils are in positions similar to those of the Bama soils and have a coarse-loamy argillic horizon.
- The Malbis soils are in positions similar to those of the Bama soils and have a brownish argillic horizon and a significant accumulation of plinthite in the subsoil.
- The moderately well drained Saucier soils are in slightly lower, more concave positions than those of the Bama soils.
- The moderately well drained Vancleave soils are in the lower positions and have a brownish fragipan.

Typical Pedon

Bama fine sandy loam, 0 to 2 percent slopes; about 2.0 miles west of Harleston on the Davis-Sawmill Road; 40 feet north of road; 40 feet north and 1,200 feet east of the southwest corner of sec. 1, T. 4 S., R. 6 W.

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

EB—3 to 10 inches; yellowish brown (10YR 5/6) fine sandy loam; weak coarse subangular blocky structure; friable; common fine roots; strongly acid; gradual wavy boundary.

Bt1—10 to 25 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—25 to 40 inches; yellowish red (5YR 4/6) sandy clay loam; weak medium subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—40 to 48 inches; red (2.5YR 4/6) loam; weak medium subangular blocky structure; firm; common faint clay films on faces of peds; few thin streaks of yellowish brown sand; very strongly acid; gradual wavy boundary.

Bt4—48 to 59 inches; yellowish red (5YR 4/6) clay loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt5—59 to 73 inches; red (2.5YR 4/6) clay loam; weak coarse subangular blocky structure; firm; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt6—73 to 78 inches; 55 percent red (2.5YR 4/6), 25 percent olive yellow (2.5Y 6/6), and 20 percent brownish yellow (10YR 6/6) loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

BC—78 to 84 inches; brownish yellow (10YR 6/8) loam; weak coarse subangular blocky structure; few faint clay films on faces of peds; common medium faint light yellowish brown (10YR 6/4) iron depletions and common fine distinct yellowish red (5YR 4/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3

E or EB horizon: (where present)
Color—hue of 10YR or 7.5YR, value of 5 or 6, and chroma of 3 to 6
Texture—loam or fine sandy loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—loam, clay loam, or sandy clay loam
Relic redoximorphic features (where present)—none to common iron depletions in shades of brown or gray and iron accumulations in shades of red, yellow, or brown

BC horizon: (where present)
Color—hue of 10R to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, clay loam, or sandy clay loam
Relic redoximorphic features (where present)—none to common iron depletions in shades of brown or gray and iron accumulations in shades of red, yellow, or brown

Bayou Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landform: Marine terrace
Landform position: Flats and swales
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults

Commonly Associated Soils

Escambia, Harleston, and Smithton soils are commonly associated with the Bayou series.

- The somewhat poorly drained Escambia soils and moderately well drained Harleston soils are in the slightly higher, more convex positions.
- The Smithton soils are in swales and drainageways and are subject to flooding.

Typical Pedon

Bayou sandy loam, 0 to 1 percent slopes; about 1.5 miles north of Fountainbleau; about 2,000 feet south and 1,900 feet west of the northeast corner of sec. 19, T. 7 S., R. 7 W.

Ap—0 to 7 inches; dark gray (10YR 4/1) sandy loam; moderate medium granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.
Btg1—7 to 15 inches; gray (10YR 5/1) sandy loam; moderate fine subangular blocky structure; very friable; common fine roots; few faint clay films on faces of peds; common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg2—15 to 26 inches; gray (10YR 6/1) sandy loam; weak fine and medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; common medium distinct brownish yellow (10YR 6/6) and pale brown (10YR 6/3) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg3—26 to 40 inches; light brownish gray (10YR 6/2) sandy loam; weak medium subangular blocky structure; friable; few fine roots; common distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg4—40 to 50 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; common distinct clay films on faces of peds; common medium distinct brownish yellow (10YR 6/6) and strong brown (7.5YR 4/6) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg5—50 to 80 inches; light brownish gray (10YR 6/2) clay loam; weak medium prismatic structure parting to moderate medium subangular blocky; friable;

common distinct clay films on faces of peds; common medium distinct brownish yellow (10YR 6/6) and strong brown (7.5YR 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap or A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 or 2
Redoximorphic features (where present)—none to common iron depletions in shades of gray and none to common masses of iron accumulation in shades of brown or yellow

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—sandy loam or loam in the upper part; sandy clay loam or clay loam in the lower part
Redoximorphic features—few or common masses of iron accumulation in shades of red, yellow, or brown

Benndale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine or fluviomarine sediments
Landform: Ridges
Landform position: Summits and side slopes
Slope: 0 to 12 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Paleudults

Commonly Associated Soils

Escambia, Malbis, Ruston, and Saucier soils are commonly associated with the Benndale series.

- The somewhat poorly drained Escambia soils and moderately well drained Saucier soils are in the slightly lower, more concave positions.
- The Malbis soils are in positions similar to those of the Benndale soils and are fine-loamy.
- The Ruston soils are in positions similar to those of the Benndale soils and have a reddish, fine-loamy argillic horizon.

Typical Pedon

Benndale fine sandy loam, 0 to 2 percent slopes; about 100 feet east of Hinton Road; about 1,900 feet north and 1,150 feet west of the southeast corner of sec. 16, T. 4 S., R. 4 W.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak coarse granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.
Bt1—6 to 18 inches; light yellowish brown (10YR 6/4) sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.
Bt2—18 to 32 inches; yellowish brown (10YR 5/6) loam; moderate medium

subangular blocky structure; friable; common fine and few medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt3—32 to 44 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; few medium roots; common faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt4—44 to 48 inches; brownish yellow (10YR 6/8) sandy clay loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; friable; common distinct clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt5—48 to 52 inches; brownish yellow (10YR 6/6) sandy clay loam; moderate medium subangular blocky structure; firm; common distinct clay films on faces of peds; many medium and coarse prominent red (2.5YR 4/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

Bt6—52 to 61 inches; brownish yellow (10YR 6/6) sandy clay loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; many medium prominent red (2.5YR 4/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

Bt7—61 to 66 inches; brownish yellow (10YR 6/6) loam; weak medium subangular blocky structure; firm; few faint clay films on faces of peds; many medium faint brownish yellow (10YR 6/8) and many coarse prominent red (2.5YR 4/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; abrupt smooth boundary.

Bt8—66 to 74 inches; brownish yellow (10YR 6/6) sandy clay loam; weak coarse subangular blocky structure; firm; many fine and medium prominent red (2.5YR 4/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; abrupt smooth boundary.

C—74 to 81 inches; red (2.5YR 4/6) sandy loam; massive; very firm; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap or A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3

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

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam, loam, or sandy clay loam
Relic redoximorphic features (where present)—none to common iron depletions in shades of brown and masses of iron accumulation in shades of brown or red

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of red, brown, and gray
Texture—loam, sandy loam, or loamy sand

Bigbee Series

Depth class: Very deep
Drainage class: Excessively drained

Permeability: Rapid
Parent material: Sandy alluvium
Landform: Low terraces and flood plains
Landform position: Convex slopes on terraces and on natural levees along flood plains
Slope: 0 to 5 percent
Taxonomic class: Thermic, coated Typic Quartzipsamments

Commonly Associated Soils

Jena, Latonia, Nugent, and Ocilla soils are commonly associated with the Bigbee series.

- The loamy, well drained Jena soils are on natural levees.
- The loamy, well drained Latonia soils are in the slightly lower positions on terraces.
- The Nugent soils are in positions similar to those of the Bigbee soils on natural levees and have strata of finer-textured materials in the substratum.
- The somewhat poorly drained Ocilla soils are in the lower positions on terraces and have a loamy argillic horizon within a depth of 20 to 40 inches.

Typical Pedon

Bigbee loamy sand, 0 to 5 percent slopes, occasionally flooded; about 1.2 miles south of the George County line; about 900 feet south and 900 feet west of the northeast corner of sec. 9, T. 4 S., R. 6 W.

A—0 to 5 inches; dark gray (10YR 4/2) loamy sand; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary.
C1—5 to 33 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; few fine roots; strongly acid; clear wavy boundary.
C2—33 to 41 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; few fine roots; many thin streaks of clean sand; strongly acid; gradual wavy boundary.
C3—41 to 80 inches; yellow (10YR 7/6) fine sand; single grained; loose; many thin streaks of clean sand; strongly acid; gradual wavy boundary.
C4—80 to 93 inches; light yellowish brown (10YR 6/4) sand; single grained; loose; common thin streaks of clean sand; common fine faint brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except in areas that have been limed

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

C horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 4 to 6 in the upper part; hue of 10YR, value of 6 or 7, and chroma of 3 to 6 in the lower part
Texture—loamy sand, fine sand, or sand in the upper part; sand or fine sand in the lower part

Boykin Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Rapid in the surface and subsurface layers and moderate in the subsoil

Parent material: Sandy and loamy sediments
Landform: Ridges and hillslopes
Landform position: Side slopes, shoulder slopes, and backslopes
Slope: 5 to 17 percent
Taxonomic class: Loamy, siliceous, active, thermic Arenic Paleudults

Commonly Associated Soils

Smithdale and Wadley soils are commonly associated with the Boykin series.

- The Smithdale soils are in positions similar to those of the Boykin soils and do not have a thick, sandy epipedon.
- The somewhat excessively drained Wadley soils are in positions similar to those of the Boykin soils and have a sandy epipedon that is 40 to 80 inches thick.

Typical Pedon

Boykin loamy sand, in an area of Smithdale-Boykin complex, 5 to 17 percent slopes; about 200 feet northeast of Griffin River Road; about 150 feet northwest and 200 feet northeast of the southeast angled corner of sec. 35, T. 7 S., R. 6 W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; common medium and coarse roots; very strongly acid; abrupt smooth boundary.

E—7 to 22 inches; yellowish brown (10YR 5/4) loamy sand; weak coarse subangular blocky structure; very friable; common medium and coarse roots; very strongly acid; abrupt smooth boundary.

Bt1—22 to 27 inches; strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few medium roots; common distinct clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—27 to 48 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; few fine faint strong brown (7.5YR 5/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

Bt3—48 to 53 inches; yellowish red (5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt4—53 to 80 inches; yellowish red (5YR 5/8) sandy clay loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; common fine distinct strong brown (7.5YR 5/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except in areas that have been limed

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4

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

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy clay loam

Chastain Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Clayey alluvium
Landform: Flood plains
Landform position: Backswamps
Slope: 0 to 1 percent
Taxonomic class: Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

Arat, Kinston, and Mantachie soils are commonly associated with the Chastain series.

- The very poorly drained Arat soils are in depressions at the slightly lower elevations.
- The Kinston soils are in positions similar to those of the Chastain soils and are fine-loamy.
- The somewhat poorly drained Mantachie soils are on natural levees at the slightly higher elevations.

Typical Pedon

Chastain clay loam, in an area of Kinston, Chastain, and Mantachie soils, frequently flooded; about 300 feet northeast of Caswell Lake; about 1,100 feet south and 2,500 feet west of the northeast corner of sec. 21, T. 5 S., R. 6 W.

A—0 to 2 inches; dark yellowish brown (10YR 4/4) clay loam; weak medium granular structure; friable; few fine and medium roots; many fine faint dark gray (10YR 4/1) iron depletions; common fine faint dark yellowish brown (10YR 4/6) masses of iron accumulation; very strongly acid; abrupt wavy boundary.

Bg1—2 to 12 inches; dark gray (10YR 4/1) silty clay; moderate medium subangular blocky structure; firm; few medium roots; common medium faint gray (10YR 5/1) iron depletions; common fine faint brown (10YR 4/3) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bg2—12 to 17 inches; gray (10YR 5/1) silty clay; moderate medium subangular blocky structure; firm; few fine roots; few charcoal fragments; few medium faint gray (10YR 6/1) iron depletions; many fine distinct brown (10YR 4/3) masses of iron accumulation on faces of peds; very strongly acid; gradual wavy boundary.

Bg3—17 to 23 inches; grayish brown (10YR 5/2) clay; moderate medium subangular blocky structure; firm; few fine roots; few medium faint gray (10YR 6/1) iron depletions; many fine and medium distinct yellowish brown (10YR 5/6) and common medium distinct brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bg4—23 to 35 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium subangular blocky structure; firm; many fine and medium distinct yellowish brown (10YR 5/6) and common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bg5—35 to 46 inches; light brownish gray (10YR 6/2) silty clay; weak medium subangular blocky structure; firm; many fine and medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bg6—46 to 55 inches; grayish brown (2.5Y 5/2) silty clay loam; weak coarse subangular blocky structure; firm; many fine prominent red (10R 4/6) and common medium prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

2Cg—55 to 74 inches; grayish brown (2.5Y 5/2) loamy sand; massive; friable; many coarse prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 40 inches
Reaction: Very strongly acid or strongly acid throughout the profile
Redoximorphic features—few to many iron depletions in shades of gray and masses of iron accumulation in shades of brown, yellow, or red throughout the profile

A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4

Bg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—silty clay, clay, clay loam, or silty clay loam

2Cg horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—loamy sand, sand, or fine sand

Columbus Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy fluvial sediments
Landform: Low stream terraces
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

Harleston, Johns, and Latonia soils are commonly associated with the Columbus series.

- The Harleston soils are in the slightly higher positions and are coarse-loamy.
- The somewhat poorly drained Johns soils are in positions similar to those of the Columbus soils.
- The well drained Latonia soils are in positions similar to those of the Columbus soils and are coarse-loamy.

Typical Pedon

Columbus loam, 0 to 2 percent slopes, occasionally flooded; about 400 feet east of Big Cedar Creek; about 1,700 feet north and 500 feet east of the southwest corner of sec. 9, T. 4 S., R. 6 W.

Ap—0 to 6 inches; brown (10YR 4/3) loam; weak coarse granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.

BE—6 to 16 inches; yellowish brown (10YR 5/6) loam; weak coarse subangular blocky structure; friable; common fine and medium roots; strongly acid; gradual wavy boundary.

Bt1—16 to 30 inches; dark yellowish brown (10YR 4/6) loam; weak medium subangular blocky structure; friable; common medium roots; few faint clay films on faces of peds; few fine distinct light brownish gray (10YR 6/2) iron depletions; few fine faint yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt2—30 to 36 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few medium roots; few faint clay films on faces of peds; many fine and medium distinct light brownish gray (10YR 6/2) iron depletions on faces of peds; common medium prominent red (10R 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt3—36 to 48 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; many medium distinct light brownish gray (10YR 6/2) iron depletions; common medium prominent yellowish red (5YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

BC—48 to 52 inches; yellowish brown (10YR 5/6) loam; weak coarse subangular blocky structure; friable; few medium roots; common medium distinct light brownish gray (10YR 6/2) iron depletions; common medium distinct dark brown (7.5YR 4/4) masses of iron accumulation; strongly acid; clear smooth boundary.

C—52 to 64 inches; strong brown (7.5YR 5/6) sandy loam; massive; very friable; many coarse prominent gray (10YR 6/1) iron depletions; common medium distinct light yellowish brown (2.5Y 6/4) iron depletions; very strongly acid; clear wavy boundary.

2Cg1—64 to 68 inches; light gray (10YR 7/1) loamy sand; massive; firm; few thin lenses of brownish yellow (10YR 6/6) sandy loam; common medium faint light yellowish brown (2.5Y 6/4) masses of iron accumulation; very strongly acid; clear wavy boundary.

2Cg2—68 to 82 inches; light gray (10YR 7/1) sand; single grained; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 35 to 60 inches

Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

A or Ap horizon:

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

BE or EB horizon:

Color—hue of 10YR, value of 4 or 5, and chroma of 3 to 6

Texture—fine sandy loam or loam

Bt horizon:

Color—hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 3 to 8

Texture—sandy clay loam, clay loam, or loam

Redoximorphic features—few to many iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

BC horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8; or no dominant matrix color and multicolored in shades of brown, gray, and red

Texture—loam or sandy clay loam

Redoximorphic features—few to many iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

C horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of gray, brown, and red

Texture—fine sandy loam or sandy loam
Redoximorphic features—few to many iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

2Cg horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2
Texture—loamy sand, sand, or sandy loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown or red

Corolla Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very rapid
Parent material: Sandy marine sediments and eolian sand
Landform: Barrier islands
Landform position: Lower slopes of dunes; flats
Slope: 0 to 6 percent
Taxonomic class: Thermic, uncoated Aquic Quartzipsamments

Commonly Associated Soils

Duckston and Newhan soils are commonly associated with the Corolla series.

- The poorly drained Duckston soils are in the lower, more concave positions.
- The excessively drained Newhan soils are on the higher parts of dunes.

Typical Pedon

Corolla fine sand, in an area of Newhan-Corolla complex, rolling; on the east side of Petit Bois Island; 600 feet north and 500 feet west of the southeast corner of sec. 35, T. 9 S., R. 5 W.

A—0 to 5 inches; grayish brown (10YR 5/2) fine sand; single grained; loose; common fine roots; slightly acid; gradual smooth boundary.
C—5 to 16 inches; light olive brown (2.5Y 5/4) fine sand; single grained; loose; few fine roots; few thin streaks of dark brown fine sand; slightly acid; gradual wavy boundary.
Cg1—16 to 28 inches; grayish brown (2.5Y 5/2) fine sand; single grained; loose; common thin streaks of dark brown fine sand; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; neutral; gradual wavy boundary.
Cg2—28 to 46 inches; light brownish gray (2.5Y 6/2) fine sand; single grained; loose; common fine faint dark gray (10YR 4/1) iron depletions; few fine distinct strong brown (7.5YR 4/6) masses of iron accumulation; neutral; gradual wavy boundary.
Cg3—46 to 80 inches; gray (10YR 5/1) fine sand; single grained; loose; neutral.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Slightly acid to mildly alkaline throughout the profile

A horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 or 3

C horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 or 4
Texture—fine sand or sand

Cg Horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—fine sand or sand

Croatan Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Slow
Parent material: Herbaceous organic material and the underlying loamy sediments
Landform: Flood plains
Landform position: Backswamps
Slope: 0 to 1 percent
Taxonomic class: Loamy, siliceous, dysic, thermic Terric Haplosaprists

Commonly Associated Soils

Harleston, Hyde, and Johnston soils are commonly associated with the Croatan series.

- The moderately well drained Harleston soils are on low terraces.
- The Hyde soils are in slightly higher positions than those of the Croatan soils and do not have a histic epipedon.
- The Johnston soils are in positions similar to those of the Croatan soils and are coarse-loamy.

Typical Pedon

Croatan muck, in an area of Croatan and Johnston soils, frequently flooded; about 0.5 mile west of Harleston; 600 feet west and 1,500 feet north of the southeast corner of sec. 6, T. 4 S., R. 5 W.

Oa1—0 to 8 inches; black (10YR 2/1) muck; about 15 percent fibers unrubbed and 4 percent fibers rubbed; weak coarse subangular blocky structure; many fine and medium roots; extremely acid; gradual wavy boundary.
Oa2—8 to 16 inches; black (10YR 2/1) muck; about 20 percent fibers unrubbed and less than 4 percent rubbed; massive; few fine roots; common fragments of partially decomposed wood; extremely acid; clear wavy boundary.
2Ag—16 to 50 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium subangular blocky structure; common fine faint brown (10YR 5/3) organic coatings; few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; extremely acid; gradual wavy boundary.
2Cg1—50 to 66 inches; grayish brown (10YR 5/2) clay loam; massive; firm; common streaks of pinkish gray (7.5YR 6/2) silt loam; common fine prominent strong brown (7.5YR 5/6) and few medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; gradual smooth boundary.
2Cg2—66 to 85 inches; grayish brown (10YR 5/2) clay loam; massive; firm; common fine prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of organic material: Commonly 16 to 35 inches but ranges from 16 to 51 inches
Coarse fragments: 0 to 10 percent woody fragments consisting of logs, stumps, and limbs

Oa tier:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2
Reaction—ultra acid or extremely acid

2Ag horizon:
Color—hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 1 or 2
Texture—fine sandy loam, sandy loam, or loam
Reaction—extremely acid to slightly acid

2Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—variable, ranging from sand to clay
Reaction—extremely acid to slightly acid

Daleville Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Loamy sediments
Landform: Terraces
Landform position: Flats, shallow swales, and shallow depressions
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, active, thermic Typic Paleaquults

Commonly Associated Soils

Lenoir, Quitman, and Smithton soils are commonly associated with the Daleville series.

- The somewhat poorly drained Lenoir soils are in positions similar to those of the Daleville soils at the lower elevations and have a clayey argillic horizon.
- The somewhat poorly drained Quitman soils are in slightly higher positions than those of the Daleville soils.
- The Smithton soils are in swales and drainageways and are coarse-loamy.

Typical Pedon

Daleville silt loam, 0 to 1 percent slopes; about 500 feet west of Gautier-Vancleave road; about 1,300 feet north and 1,300 feet west of the southeast corner of sec. 23, T. 7 S., R. 7 W.

Ap—0 to 4 inches; very dark gray (10YR 3/1) silt loam; weak medium granular structure; friable; few fine and medium roots; strongly acid; abrupt smooth boundary.
Eg—4 to 8 inches; gray (10YR 5/1) silt loam; weak medium subangular blocky structure; friable; many fine roots; few thin streaks of light brownish gray (10YR 6/2) silt loam; very strongly acid; abrupt smooth boundary.
Btg1—8 to 16 inches; gray (10YR 5/1) loam; weak medium subangular blocky structure; friable; many fine roots; few faint clay films on faces of peds; few medium distinct yellowish brown (10YR 5/6) and few fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg2—16 to 23 inches; gray (10YR 5/1) clay loam; moderate fine subangular blocky structure; firm; many medium roots; few faint clay films on faces of peds; many coarse distinct yellowish brown (10YR 5/8) and few fine prominent red (2.5YR 4/6) masses of iron accumulation; strongly acid; clear smooth boundary.

Btg3—23 to 34 inches; grayish brown (10YR 5/2) clay loam; moderate medium subangular blocky structure; firm; few distinct clay films on faces of peds; common thin light brownish gray (2.5Y 6/2) clay depletions on faces of peds; few medium faint dark grayish brown (10YR 4/2) iron depletions in root channels; few coarse prominent reddish yellow (7.5YR 6/6) and reddish brown (5YR 4/4) masses of iron accumulation; strongly acid; clear smooth boundary.

Btg4—34 to 40 inches; gray (10YR 5/1) clay loam; moderate medium subangular blocky structure; firm; few distinct clay films on faces of peds; common thin light brownish gray (2.5Y 6/2) clay depletions on faces of peds; many fine and medium distinct dark yellowish brown (10YR 4/4) and few medium distinct yellow (10YR 7/6) masses of iron accumulation; strongly acid; clear smooth boundary.

Btg5—40 to 52 inches; dark grayish brown (10YR 4/2) clay loam; strong medium subangular blocky structure; firm; few faint clay films on faces of peds; common thin streaks of gray (10YR 5/1) silt; common medium distinct strong brown (7.5YR 5/6) and dark brown (10YR 4/4) masses of iron accumulation; strongly acid; clear smooth boundary.

Btg6—52 to 62 inches; 30 percent gray (10YR 5/1), 25 percent red (2.5YR 5/6), 25 percent dark gray (10YR 4/1), and 20 percent yellow (10YR 7/6) clay loam; weak coarse subangular blocky structure; firm; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed
Redoximorphic features: Common or many iron or clay depletions in shades of gray and masses of iron accumulation in shades of brown, red, or yellow

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2
Texture—silt loam or loam

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

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2; or no dominant matrix color and multicolored in shades of gray, brown, yellow, and red
Texture—loam, clay loam, or sandy clay loam

Duckston Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very rapid
Parent material: Sandy marine sediments
Landform: Barrier islands
Landform position: Flats and depressions between dunes
Slope: 0 to 2 percent
Taxonomic class: Siliceous, thermic Typic Psammaquents

Commonly Associated Soils

Corolla and Newhan soils are commonly associated with the Duckston series.

- The somewhat poorly drained Corolla soils are on the lower parts of dunes.
- The excessively drained Newhan soils are on dunes.

Typical Pedon

Duckston sand, 0 to 2 percent slopes; about 1.2 miles south of Gulfpark Airport and 0.2 mile south of Point Aux Chenes Road; 535 feet south and 140 feet west of the northeast corner of sec. 12., T. 8 S., R. 8 W.

A—0 to 13 inches; very dark gray (10YR 3/1) sand; single grained; loose; common medium roots; strongly acid; clear smooth boundary.

Cg1—13 to 21 inches; gray (10YR 5/1) fine sand; single grained; loose; few fine and medium roots; thin dark brown organic coatings on some sand grains; strongly acid; clear smooth boundary.

Cg2—21 to 70 inches; light gray (10YR 7/2) fine sand; single grained; loose; thin dark brown organic coatings on some sand grains; strongly acid.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Very strongly acid to moderately acid throughout the profile

A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2

Cg horizon:
Color—hue of 10YR, value of 5 to 8, and chroma of 1 or 2
Texture—sand or fine sand

Escambia Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Loamy marine sediments
Landform: Marine terraces
Landform position: Flats and side slopes
Slope: 0 to 5 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults

Commonly Associated Soils

Atmore, Bayou, Benndale, and Vancleave soils are commonly associated with the Escambia series.

- The poorly drained Atmore and Bayou soils are in the slightly lower, more concave positions.
- The well drained Benndale soils and moderately well drained Vancleave soils are in the slightly higher, more convex positions.

Typical Pedon

Escambia very fine sandy loam, 0 to 2 percent slopes; about 5.0 miles north of Wade; about 1,500 feet north and 800 feet west of the southeast corner of sec. 9, T. 4 S., R. 6 W.

Ap—0 to 4 inches; very dark gray (10YR 3/1) very fine sandy loam; weak medium granular structure; very friable; many fine roots; strongly acid; clear smooth boundary.

Bt1—4 to 16 inches; light yellowish brown (10YR 6/4) fine sandy loam; weak fine granular structure; very friable; many fine roots; few faint clay films on faces of peds; few medium faint gray (10YR 6/1) iron depletions on faces of peds; strongly acid; abrupt smooth boundary.

Bt2—16 to 22 inches; brownish yellow (10YR 6/6) very fine sandy loam; weak medium subangular blocky structure; very friable; few fine roots; few faint clay films on faces of peds; common fine and medium faint light brownish gray (10YR 6/2) iron depletions; common medium distinct strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid; clear wavy boundary.
Btv—22 to 31 inches; light yellowish brown (10YR 6/4) loam; weak medium subangular blocky structure; friable; few fine roots; about 8 percent nodular plinthite; few medium faint light brownish gray (10YR 6/2) iron depletions; common coarse distinct strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btvg1—31 to 44 inches; light brownish gray (10YR 6/2) loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable; few fine roots; few faint clay films on faces of peds; about 15 percent nodular plinthite; about 5 percent coarse nodules of ironstone; thin seams of light gray (10YR 7/1) clay depletions between prisms; common medium and coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Btvg2—44 to 58 inches; gray (10YR 6/1) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; few faint clay films on faces of peds; about 6 percent nodular plinthite; common coarse faint grayish brown (10YR 5/2) iron depletions; moderate medium distinct yellowish brown (10YR 5/6) and few coarse prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
Btg1—58 to 75 inches; gray (10YR 6/1) sandy clay loam; moderate medium subangular blocky structure; firm; few distinct clay films on faces of peds; many fine and medium prominent dark yellowish brown (10YR 4/4) and common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg2—75 to 85 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; common fine prominent red (2.5YR 4/6) and few fine distinct yellow (10YR 7/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2

Bt and Btv horizons:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 6
Texture—very fine sandy loam, fine sandy loam, loam, sandy clay loam, or silt loam
Redoximorphic features—few to many iron or clay depletions in shades of gray or brown and masses of iron accumulation in shades of red, brown, or gray

Btvg and Btg horizons:
Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2
Texture—loam, sandy clay loam, or clay loam

Eustis Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderately rapid

Parent material: Sandy marine sediments
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 2 to 17 percent
Taxonomic class: Siliceous, thermic Psammentic Paleudults

Commonly Associated Soils

Benndale, Smithdale, and Wadley soils are commonly associated with the Eustis series and are in positions similar to those of the Eustis soils.

- The Benndale soils are coarse-loamy.
- The Smithdale soils are fine-loamy.
- The Wadley soils have a loamy argillic horizon within a depth of 40 to 80 inches.

Typical Pedon

Eustis loamy sand, 2 to 5 percent slopes; 4.5 miles north of Wade; 1,000 feet north and 300 feet west of the southeast corner of sec. 10, T. 4 S., R. 6 W.

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine granular structure; very friable; few medium roots; very strongly acid; abrupt smooth boundary.
E1—5 to 9 inches; dark yellowish brown (10YR 4/4) loamy fine sand; weak fine granular structure; very friable; few medium roots; very strongly acid; abrupt wavy boundary.
E2—9 to 20 inches; brown (10YR 5/3) loamy fine sand; weak coarse subangular blocky structure; very friable; few fine and medium roots; common thin streaks of clean sand; very strongly acid; gradual wavy boundary.
E3—20 to 30 inches; strong brown (7.5YR 5/6) loamy fine sand; weak coarse subangular blocky structure; very friable; common thin streaks of clean sand; very strongly acid; gradual wavy boundary.
Bt1—30 to 40 inches; yellowish red (5YR 4/6) loamy sand; weak coarse subangular blocky structure; very friable; sand grains are bridged and coated with clay; very strongly acid; gradual wavy boundary.
Bt2—40 to 56 inches; yellowish red (5YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; sand grains are bridged and coated with clay; very strongly acid; gradual wavy boundary.
Bt3—56 to 70 inches; strong brown (7.5YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; sand grains are bridged and coated with clay; few thin lamellae; common thin streaks of clean sand; common medium faint yellowish red (5YR 5/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; abrupt wavy boundary.
C—70 to 82 inches; yellowish red (5YR 5/6) fine sand; single grained; loose; few thin streaks of clean sand; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except in areas that have been limed

Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 or 3

E horizon:
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6
Texture—sand, fine sand, loamy fine sand, or loamy sand

Bt horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loamy fine sand or loamy sand

C horizon:
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—fine sand or sand

Freest Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Loamy and clayey marine sediments
Landform: Ridges
Landform position: Summits, side slopes, and footslopes
Slope: 1 to 8 percent
Taxonomic class: Fine-loamy, siliceous, active, thermic Aquic Paleudalfs

Commonly Associated Soils

Malbis, Saucier, and Susquehanna soils are commonly associated with the Freest series.

- The Malbis and Saucier soils are in positions similar to those of the Freest soils and have a significant accumulation of plinthite in the subsoil.
- The Susquehanna soils are on side slopes and have a clayey argillic horizon.

Typical Pedon

Freest sandy loam, in an area of Susquehanna-Freest complex, 1 to 5 percent slopes; 30 feet west of the Larue-Dantzler Road; 480 feet south and 2,630 feet west of the northeast corner of sec. 35, T. 4 S., R. 9 W.

Ap—0 to 3 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; clear smooth boundary.

E—3 to 6 inches; brown (10YR 5/3) sandy loam; weak medium granular structure; friable; many fine and medium roots; strongly acid; clear smooth boundary.

Bt1—6 to 17 inches; olive yellow (2.5Y 6/6) loam; weak medium subangular blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; common fine and medium distinct brown (10YR 5/3) iron depletions; common medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt2—17 to 23 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; firm; few fine roots; few faint clay films on faces of peds; few medium distinct light brownish gray (10YR 6/2) iron depletions; common coarse prominent red (2.5YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Bt3—23 to 45 inches; yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; few fine and medium distinct light gray (10YR 7/1) iron depletions; many medium prominent red (2.5YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Bt4—45 to 56 inches; yellowish brown (10YR 5/6) clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common faint clay films on faces of peds; common fine and medium distinct light gray (10YR 6/1) iron depletions; few fine and medium prominent red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt5—56 to 78 inches; yellowish brown (10YR 5/8) silty clay; weak coarse prismatic structure parting to moderate medium angular blocky; firm; common faint clay films on faces of peds; thin seams of light gray (10YR 7/1) clay depletions on faces of prisms; many medium prominent brownish yellow (10YR 6/8) and common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Cg—78 to 88 inches; light brownish gray (2.5Y 6/2) clay; massive; firm; many coarse prominent strong brown (7.5YR 5/8) and common medium prominent light reddish brown (2.5YR 6/4) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3

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

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

Bt horizon, lower part:
Color—similar to the upper part, or no dominant matrix color and multicolored in shades of brown, gray, and red
Texture—clay loam, silty clay, or clay
Redoximorphic features—common or many iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown or red

Cg horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—clay loam, sandy clay loam, silty clay, or clay
Redoximorphic features—common or many masses of iron accumulation in shades of brown or red

Handsboro Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderate
Parent material: Thick accumulations of herbaceous plant remains and the underlying mineral sediments
Landform: Salt marshes
Slope: 0 to 1 percent
Taxonomic class: Euic, thermic Typic Sulfihemists

Commonly Associated Soils

Axis and Maurepas soils are commonly associated with the Handsboro series.

- The Axis soils are in positions similar to those of the Handsboro soils and do not have a thick organic epipedon.
- The Maurepas soils are in backswamps and do not have mineral layers in the upper part.

Typical Pedon

Handsboro mucky silt loam, frequently flooded; about 75 feet north of Crooked Bayou; 500 feet north and 800 feet east of the southwest corner of sec. 6., T. 8 S., R. 4 W.

A—0 to 4 inches; olive gray (5Y 4/2) mucky silt loam; massive; very fluid; many fine and common medium roots; moderately alkaline, wet; clear smooth boundary.

Oa1—4 to 16 inches; muck, dark olive gray (5Y 3/2) broken and rubbed; massive; very fluid; many medium and common fine roots; moderately alkaline, wet; clear smooth boundary.

Oa2—16 to 26 inches; muck, dark olive gray (5Y 3/2) rubbed; massive; very fluid; common fine and few medium roots; moderately alkaline, wet; abrupt smooth boundary.

Cg—26 to 28 inches; very dark grayish brown (2.5Y 3/2) sandy loam; massive; slightly fluid; common fine roots; moderately alkaline, wet; abrupt smooth boundary.

O´a1—28 to 46 inches; muck, dark olive gray (5Y 3/2) rubbed; about 50 percent fibers; massive; very fluid; common fine roots; common fine sand grains; moderately alkaline, wet; gradual smooth boundary.

O´a2—46 to 52 inches; muck, very dark gray (10YR 3/1) rubbed; massive; very fluid; few medium roots; moderately alkaline, wet; abrupt smooth boundary.

C´g1—52 to 56 inches; very dark gray (10YR 3/1) sandy loam; massive; very fluid; moderately alkaline, wet; gradual smooth boundary.

C´g2—56 to 62 inches; very dark grayish brown (10YR 3/2) sandy loam; massive; slightly fluid; moderately alkaline, wet.

Range in Characteristics

Reaction: Neutral to moderately alkaline, wet, throughout the profile

A horizon:
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2

Oa and O´a tiers:
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2
Texture—muck

Cg and C´g horizons:
Color—hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 or 2
Texture—sandy loam, loam, or silt loam

Harleston Series

Depth class: Very Deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy sediments
Landform: Terraces
Landform position: Summits and side slopes

Slope: 0 to 8 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Aquic Paleudults

Commonly Associated Soils

Latonia and Ocilla soils are commonly associated with the Harleston series.

- The well drained Latonia soils are in positions similar to those of the Harleston soils at the lower elevations.
- The somewhat poorly drained Ocilla soils are in the lower positions and have a thick, sandy epipedon.

Typical Pedon

Harleston fine sandy loam, 0 to 2 percent slopes; about 1,500 feet east of Gulf Island National Seashore Park; 900 feet south and 400 feet west of the northeast corner of sec. 33, T. 7 S., R. 8 W.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak medium granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

E—6 to 14 inches; pale brown (10YR 6/3) sandy loam; weak coarse subangular blocky structure; very friable; very strongly acid; clear smooth boundary.

Bt1—14 to 24 inches; light yellowish brown (10YR 6/4) sandy loam; weak medium subangular blocky structure; very friable; few faint clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—24 to 32 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; few streaks of clean sand; common medium distinct light brownish gray (10YR 6/2) iron depletions; many medium and coarse prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Bt3—32 to 42 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions; few medium faint strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt4—42 to 48 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; many medium and coarse distinct light brownish gray (2.5Y 6/2) iron depletions; common medium faint strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt5—48 to 62 inches; 35 percent red (2.5YR 4/6), 25 percent gray (10YR 6/1), 15 percent yellowish brown (10YR 5/6), and 25 percent strong brown (7.5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; areas of gray are iron depletions and areas of yellowish brown and strong brown are masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Extremely acid to strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3

E horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—fine sandy loam or sandy loam

Bt horizon, upper part:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or loam
Redoximorphic features—few or common iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

Bt horizon, lower part:
Color—similar to that of the upper part; or no dominant matrix color and multicolored in shades of brown, red, and gray
Texture—sandy loam, loam, or sandy clay loam
Redoximorphic features—common or many iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

Hyde Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landform: Low terraces and flood plains
Landform position: Depressions and backswamps
Slope: 0 to 1 percent
Taxonomic class: Fine-silty, mixed, active, thermic Typic Umbraquults

Commonly Associated Soils

Croatan, Harleston, Johnston, and Smithton soils are commonly associated with the Hyde series.

- The moderately well drained Harleston soils are in the higher, more convex positions.
- The Croatan and Johnston soils are in positions similar to those of the Hyde soils on flood plains. Croatan soils have a thick histic epipedon. Johnston soils are coarse-loamy.
- The poorly drained Smithton soils are in the slightly higher positions and do not have a thick, dark-colored epipedon.

Typical Pedon

Hyde silt loam; about 2.5 miles north of Helena; 800 feet south and 2,400 feet west of the northeast corner of sec. 16, T. 6 S., R. 5 W.

Ap—0 to 8 inches; black (10YR 2/1) silt loam; moderate medium granular structure; friable; common fine roots; strongly acid; abrupt smooth boundary.
Ag—8 to 14 inches; black (10YR 2/1) silt loam; weak medium granular structure; friable; few large roots; very strongly acid; clear wavy boundary.
Btg1—14 to 18 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate medium subangular blocky structure; firm; few large roots; few faint clay films on faces of peds; many fine and medium faint grayish brown (10YR 5/2) iron depletions; strongly acid; gradual wavy boundary.
Btg2—18 to 28 inches; grayish brown (10YR 5/2) silty clay loam; moderate medium subangular blocky structure; firm; common distinct clay films on faces of peds; common streaks of very dark gray (10YR 3/1) silt loam in old root channels; very strongly acid; gradual wavy boundary.
Btg3—28 to 34 inches; gray (10YR 5/1) silty clay loam; moderate medium angular blocky structure parting to moderate fine angular blocky; firm; common fine roots; common distinct clay films on faces of peds; many fine prominent strong brown

(7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4—34 to 48 inches; gray (10YR 6/1) silty clay loam; moderate medium subangular blocky structure; firm; common fine roots; common faint clay films on faces of peds; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg5—48 to 56 inches; gray (10YR 6/1) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; extremely acid; clear smooth boundary.

Cg—56 to 80 inches; stratified gray (2.5Y 5/1) clay loam and sandy loam; common medium prominent reddish brown (5YR 5/4) masses of iron accumulation on faces of peds; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Reaction: Extremely acid to strongly acid throughout the profile

Ap and Ag horizons: (where present)
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay loam, silty clay loam, silt loam, or loam
Redoximorphic features—common or many iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—commonly stratified with sand, loamy sand, sandy clay loam, loam, or clay loam
Redoximorphic features—common or many iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Jena Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy alluvium
Landform: Flood plains
Landform position: Convex positions on natural levees
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, active, thermic Fluventic Dystrudepts

Commonly Associated Soils

Bigbee, Kinston, Mantachie, and Nugent soils are commonly associated with the Jena series.

- The excessively drained Bigbee and Nugent soils are in the slightly higher positions on natural levees.
- The poorly drained Kinston soils and somewhat poorly drained Mantachie soils are in the lower positions on natural levees and in backswamps.

Typical Pedon

Jena fine sandy loam, in an area of Nugent and Jena soils, frequently flooded; about

1.1 miles south of the George County line, on Cedar Creek; about 520 feet south and 2,300 feet west of the northeast corner of sec. 9, T. 4 S., R. 6 W.

Ap—0 to 6 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; friable; many fine roots; very strongly acid; clear smooth boundary.
Bw1—6 to 12 inches; brown (10YR 4/3) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; very strongly acid; clear wavy boundary.
Bw2—12 to 36 inches; brown (10YR 5/3) fine sandy loam; weak medium subangular blocky structure; friable; few fine and medium roots; very strongly acid; clear smooth boundary.
Bw3—36 to 46 inches; pale brown (10YR 6/3) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid; clear smooth boundary.
C—46 to 65 inches; light yellowish brown (10YR 6/4) loamy fine sand; single grained; loose; common thin streaks of uncoated sand; common medium faint pale brown (10YR 6/3) iron depletions; common medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 50 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

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

Bw horizon:
Color—hue of 10YR, value of 4 to 6, and chroma of 3 or 4
Texture—fine sandy loam, sandy loam, or loam

C horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 or 4
Texture—loamy fine sand, sandy loam, or fine sandy loam

Johns Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy and sandy alluvium
Landform: Stream terraces
Landform position: Flats
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

Columbus, Latonia, Quitman, and Smithton soils are commonly associated with the Johns series.

- The moderately well drained Columbus soils and the well drained Latonia soils are in the slightly higher, more convex positions.
- The Quitman soils are in positions similar to those of the Johns soils and do not have sandy layers within a depth of 60 inches.
- The poorly drained Smithton soils are in shallow drainageways.

Typical Pedon

Johns loamy fine sand, 0 to 2 percent slopes; 100 feet east of Bayou Heron Road; 2,000 feet south and 1,150 feet east of the northwest corner of sec. 18, T. 7 S., R. 4 W.

Ap—0 to 7 inches; very dark gray (10YR 3/1) loamy fine sand; weak medium granular structure; very friable; many fine, common very fine, and few medium roots; very strongly acid; abrupt wavy boundary.

E—7 to 13 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak medium subangular blocky structure; friable; common fine and very fine roots; few fine distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.

EB—13 to 16 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak medium subangular blocky structure; friable; common fine and few coarse roots; common fine faint gray (10YR 6/1) iron depletions; many fine and medium distinct brownish yellow (10YR 6/8) and common fine prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bt1—16 to 26 inches; very pale brown (10YR 7/4) sandy clay loam; moderate medium subangular blocky structure; few fine roots; common faint clay films on faces of peds; common medium prominent red (2.5YR 4/8) and common medium distinct yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Bt2—26 to 34 inches; 40 percent gray (10YR 6/1), 35 percent brownish yellow (10YR 6/8), 15 percent red (2.5YR 4/8), and 10 percent reddish yellow (7.5YR 6/8) sandy loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; areas of brownish yellow, red, and reddish yellow are masses of iron accumulation; areas of gray are iron depletions; very strongly acid; clear smooth boundary.

2Cg1—34 to 47 inches; light gray (10YR 7/1) sand; single grained; loose; common thin streaks of uncoated sand; few fine distinct light olive brown (2.5Y 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

2Cg2—47 to 82 inches; white (10YR 8/1) sand; single grained; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 15 to 40 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

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

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 or 4
Texture—sandy loam or fine sandy loam

EB horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam or fine sandy loam
Redoximorphic features—few or common iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown, yellow, or red

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8; or no dominant matrix color and multicolored in shades of gray, brown, yellow, and red
Texture—clay loam, sandy clay loam, or sandy loam

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

2Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2
Texture—coarse sand, sand, or loamy sand
Redoximorphic features—few to many masses of iron accumulation in shades of brown, yellow, or red

Johnston Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately rapid
Parent material: Loamy alluvium
Landform: Flood plains
Landform position: Concave backswamps
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts

Commonly Associated Soils

Croatan, Hyde, and Mantachie soils are commonly associated with the Johnston series.

- The Croatan soils are in the slightly lower positions and have a histic epipedon.
- The Hyde soils are in positions similar to those of the Johnston soils and are fine-silty.
- The somewhat poorly drained Mantachie soils are in the slightly higher positions and do not have a thick, dark-colored surface layer.

Typical Pedon

Johnston mucky loam, in an area of Croatan and Johnston soils, frequently flooded; 0.5 mile northeast of Good Hope Church; 2,500 feet north and 900 feet west of the southeast corner of sec. 11, T. 4 S., R. 6 W.

A—0 to 26 inches; black (10YR 2/1) mucky loam; massive; friable; many fine and medium roots; very strongly acid; clear wavy boundary.
Cg1—26 to 48 inches; gray (10YR 6/1) sandy loam; massive; friable; few thin strata of sandy loam; strongly acid; gradual smooth boundary.
Cg2—48 to 68 inches; light gray (10YR 7/1) sand; massive; very friable; few thin strata of sandy loam; strongly acid.

Range in Characteristics

Reaction: Very strongly or strongly acid throughout the profile

A horizon:
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2

Cg Horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—commonly stratified in textures of sandy loam, loamy sand, or sand

Kinston Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate

Parent material: Stratified loamy and sandy alluvium
Landform: Flood plains
Landform position: Backswamps
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

Arat, Chastain, and Mantachie soils are commonly associated with the Kinston series.

- The very poorly drained Arat soils are in depressional positions at the slightly lower elevations.
- The clayey Chastain soils are in positions similar to those of the Kinston soils.
- The somewhat poorly drained Mantachie soils are in slightly higher, more convex positions than those of the Kinston soils.

Typical Pedon

Kinston fine sandy loam, in an area of Kinston, Chastain, and Mantachie soils, frequently flooded; about 1.6 miles northwest of Cumbest Bluff; 800 feet north and 500 feet east of the southwest corner of sec. 15, T. 5 S., R. 6 W.

A—0 to 6 inches; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; friable; many fine roots; very strongly acid; abrupt smooth boundary.
Bg1—6 to 12 inches; grayish brown (10YR 5/2) loam; moderate medium subangular blocky structure; friable; common fine roots; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Bg2—12 to 31 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; friable; common medium prominent yellowish brown (10YR 5/6) and few medium prominent strong brown (7.5YR 4/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Bg3—31 to 56 inches; gray (10YR 6/1) loam; weak medium subangular blocky structure; friable; many fine and medium prominent strong brown (7.5YR 4/6) and common fine prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Cg1—56 to 59 inches; 60 percent gray (10YR 6/1), 30 percent yellowish brown (10YR 5/6), and 10 percent strong brown (7.5YR 4/6) loam; massive; friable; areas of yellowish brown and strong brown are masses of iron accumulation; areas of gray are iron depletions; very strongly acid; clear smooth boundary.
Cg2—59 to 86 inches; gray (5Y 5/1) sandy loam; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 40 inches
Reaction: Very strongly acid or strongly acid throughout the profile

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3

Bg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—loam, sandy clay loam, or clay loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown, red, or yellow

Cg horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or no dominant matrix color and multicolored in shades of gray, brown, yellow, and red

Texture—sandy loam or loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown, red, or yellow

Latonia Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Parent material: Loamy and sandy alluvium
Landform: Low stream terraces
Landform position: Flats
Slope: 0 to 2
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Hapludults

Commonly Associated Soils

Columbus, Harleston, and Suffolk soils are commonly associated with the Latonia series.

- The moderately well drained Columbus soils are in slightly lower positions than those of the Latonia soils and are fine-loamy.
- The moderately well drained Harleston soils and fine-loamy Suffolk soils are in positions similar to those of the Latonia soils but are at higher elevations.

Typical Pedon

Latonia loamy sand, 0 to 2 percent slopes, occasionally flooded; about 2.0 miles east of Pine Grove Church; 1,400 feet south and 2,300 feet east of the northwest corner of sec. 5, T. 4 S., R. 7 W.

Ap—0 to 6 inches; brown (10YR 5/3) loamy sand; weak medium granular structure; very friable; few fine and medium roots; strongly acid; clear smooth boundary.
BE—6 to 13 inches; yellowish brown (10YR 5/6) sandy loam; weak coarse subangular blocky structure; friable; few fine roots; very strongly acid; clear wavy boundary.
Bt1—13 to 33 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—33 to 44 inches; brownish yellow (10YR 6/6) fine sandy loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
2C1—44 to 51 inches; brownish yellow (10YR 6/6) loamy sand; single grained; loose; many thin streaks of light gray (10YR 7/2) clean sand; common medium faint very pale brown (10YR 7/4) iron depletions; few fine prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
2C2—51 to 54 inches; very pale brown (10YR 7/3) loamy sand; single grained; common thin streaks of clean sand; few medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.
2C3—54 to 80 inches; very pale brown (10YR 8/3) loamy sand; single grained; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 45 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3

BE horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or loam

2C horizon:
Color—hue of 10YR, value of 4 to 8, and chroma of 3 to 8
Texture—loamy sand, loamy fine sand, or sand

Lenoir Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Clayey sediments
Landform: Marine or stream terraces
Landform position: Broad flats and swales
Slope: 0 to 1 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aeric Paleaquults

Commonly Associated Soils

Columbus, Hyde, and Quitman soils are commonly associated with the Lenoir series.

- The moderately well drained Columbus soils and the somewhat poorly drained Quitman soils are in slightly higher positions than those of the Lenoir soils and are fine-loamy.
- The very poorly drained Hyde soils are in depressions.

Typical Pedon

Lenoir silt loam, 0 to 1 percent slopes; about 2.0 miles south of Helena; 2,400 feet north and 1,000 feet east of the southwest corner of sec. 5, T. 7 S., R. 5 W.

Ap—0 to 6 inches; very dark gray (10YR 3/1) silt loam; weak fine granular structure; friable; many medium roots; common dark yellowish brown (10YR 3/4) masses of iron accumulation; strongly acid; abrupt smooth boundary.

E—6 to 13 inches; light yellowish brown (2.5Y 6/4) silt loam; weak medium subangular blocky structure; friable; many medium roots; few medium faint pale brown (10YR 6/3) and common medium faint dark grayish brown (10YR 4/2) iron depletions; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; abrupt wavy boundary.

Btg1—13 to 25 inches; light brownish gray (10YR 6/2) silty clay; moderate medium subangular blocky structure; firm; common medium roots; few faint clay films on faces of peds; many fine prominent red (2.5YR 4/6) and many medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg2—25 to 32 inches; gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; few medium roots; common faint clay films on faces of peds; few fine distinct brownish yellow (10YR 6/8) and many medium distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg3—32 to 50 inches; gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; few black stains of manganese oxides on faces of peds; few medium distinct dark yellowish brown (10YR 4/6) and prominent yellowish red (5YR 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg4—50 to 62 inches; light brownish gray (2.5Y 6/2) clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; few medium distinct yellowish brown (10YR 5/6) and common fine prominent red (2.5YR 4/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Cg1—62 to 79 inches; light olive gray (5Y 6/2) sandy loam; massive; firm; few medium faint light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

Cg2—79 to 84 inches; light olive gray (5Y 6/2) sandy loam; massive; firm; common thin strata of strong brown (7.5YR 5/8) sandy clay loam; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Extremely acid to strongly acid throughout the profile, except for the surface layer in areas that have been limed

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2

E horizon: (where present)

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 2 to 4

Texture—loam, silt loam, or fine sandy loam

Btg horizon:

Color—hue of 10YR to 2.5Y, value of 5 or 6, and chroma of 1 or 2

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

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

Cg horizon:

Color—hue of 10YR to 5Y, value of 5 or 6, and chroma of 1 or 2

Texture—sandy loam, sandy clay loam, clay loam, silty clay loam, clay, or sandy clay; or stratified sandy loam to clay

Redoximorphic features—few to many masses of iron accumulation in shades of yellow, brown, and red

Leon Series

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderate

Parent material: Sandy marine sediments

Landform: Marine terraces

Landform position: Flats

Slope: 0 to 1 percent

Taxonomic class: Sandy, siliceous, thermic Aeric Alaquods

Commonly Associated Soils

Harleston, Latonia, and Ocilla soils are commonly associated with the Leon series.

- The moderately well drained Harleston soils and the well drained Latonia soils are in slightly higher positions than those of the Leon soils and are coarse-loamy.
- The somewhat poorly drained Ocilla soils are in positions similar to those of the Leon soils and have a loamy argillic horizon.

Typical Pedon

Leon mucky sand, 0 to 1 percent slopes; about 1.5 miles east of St. Andrews Golf Course; 2,600 feet south and 200 feet east of the northwest corner of sec. 19, T. 8 S., R. 7 W.

Oi—2 to 0 inches; fresh and partially decomposed leaves, twigs, acorns, and pine needles.
A—0 to 6 inches; black (10YR 2/1) mucky sand; single grained; loose; many uncoated sand grains; many fine roots; extremely acid; clear smooth boundary.
Eg—6 to 13 inches; light gray (10YR 7/2) sand; single grained; loose; few fine roots; extremely acid; abrupt smooth boundary.
Bh—13 to 38 inches; black (7.5YR 2.5/1) loamy sand; massive; firm; extremely acid; gradual irregular boundary.
BC—38 to 43 inches; strong brown (7.5YR 5/6) sand; massive; slightly firm; extremely acid; gradual wavy boundary.
C—43 to 62 inches; white (10YR 8/2) sand; single grained; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 40 inches
Depth to spodic horizon: 10 to 30 inches
Reaction: Extremely acid to strongly acid throughout the profile

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2

Eg horizon:
Color—hue of 10YR, value of 5 to 8, and chroma of 1 or 2
Texture—sand or fine sand

Bh horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3
Texture—sand, fine sand, or loamy sand

BC horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 3 to 6
Texture—sand or fine sand

C horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 1 to 3
Texture—sand or fine sand

Malbis Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landform: Ridges
Landform position: Summits and side slopes
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Plinthic Paleudults

Commonly Associated Soils

Benndale, Poarch, Saucier, and Susquehanna soils are commonly associated with the Malbis series.

- The Benndale and Poarch soils are in positions similar to those of the Malbis soils and are coarse-loamy.
- The moderately well drained Saucier soils are in the slightly lower, more concave positions.
- The somewhat poorly drained Susquehanna soils are on slopes adjacent to the Malbis soils and have a clayey argillic horizon.

Typical Pedon

Malbis fine sandy loam, 0 to 2 percent slopes; about 1.0 mile east of Harleston; 750 feet north and 50 feet east of the southwest corner of sec. 4, T. 4 S., R. 5 W.

Ap—0 to 8 inches; brown (10YR 5/3) fine sandy loam; weak coarse granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.

Bt1—8 to16 inches; light yellowish brown (10YR 6/4) loam; moderate medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; strongly acid; gradual smooth boundary.

Bt2—16 to 27 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; common fine and few medium roots; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Btv1—27 to 42 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; about 15 percent nodular plinthite; very strongly acid; gradual wavy boundary.

Btv2—42 to 46 inches; brownish yellow (10YR 6/8) loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; about 12 percent nodular plinthite; few medium prominent reddish gray (5YR 5/2) and common medium faint light yellowish brown (10YR 6/4) iron depletions; very strongly acid; gradual wavy boundary.

Btv3—46 to 61 inches; brownish yellow (10YR 6/8) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; about 4 percent nodular plinthite; common coarse prominent gray (10YR 6/1) iron depletions; common coarse prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

B´t—61 to 80 inches; yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; few medium distinct gray (10YR 6/1) iron depletions; common fine and medium prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, clay loam, or sandy clay loam

Btv and B´t horizons:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of red, gray, and brown
Texture—loam, clay loam, or sandy clay loam
Redoximorphic features—few to many iron depletions in shades of brown or gray and masses of iron accumulation in shades of red, yellow, and brown

Mantachie Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy alluvium
Landform: Flood plains
Landform position: Low parts of natural levees and in backswamps
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, active, acid, thermic Fluventic Endoaquepts

Commonly Associated Soils

Arat, Chastain, Jena, and Kinston soils are commonly associated with the Mantachie series.

- The very poorly drained Arat slopes and the poorly drained Chastain soils are in depressional areas of backswamps.
- The moderately well drained Jena soils are on the high parts of natural levees and are coarse-loamy.
- The poorly drained Kinston soils are in slightly lower positions than those of the Mantachie soils.

Typical Pedon

Mantachie fine sandy loam, in an area of Kinston, Chastain, and Mantachie soils, frequently flooded; about 3 miles west of Three Rivers; 2,800 feet south and 1,300 feet west of the northeast corner of sec. 19, T. 5 S., R. 6 W.

A1—0 to 4 inches; dark brown (10YR 3/3) fine sandy loam; moderate fine granular structure; friable; common fine roots; few fine faint light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear smooth boundary.
A2—4 to 9 inches; brown (10YR 4/3) fine sandy loam; moderate fine subangular blocky structure; friable; few fine roots; common fine distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear smooth boundary.
Bw—9 to 19 inches; brown (10YR 5/3) loam; weak medium subangular blocky structure; friable; few fine roots; many medium faint light brownish gray (10YR 6/2) iron depletions; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.
Bg1—19 to 30 inches; light brownish gray (10YR 6/2) loam; weak coarse subangular blocky structure; friable; common fine faint light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Bg2—30 to 45 inches; light brownish gray (10YR 6/2) sandy clay loam; weak coarse subangular blocky structure; firm; many fine prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Bg3—45 to 53 inches; light brownish gray (10YR 6/2) clay loam; weak coarse subangular blocky structure; firm; common medium prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Cg—53 to 70 inches; light brownish gray (10YR 6/2) sandy clay loam; massive; firm; common medium prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 65 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

A horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3
Redoximorphic features—few or common iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Bw horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6; or no dominant matrix color and multicolored in shades of brown, gray, and red
Texture—loam, sandy clay loam, or clay loam
Redoximorphic features—common or many iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Bg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—clay loam, loam, or sandy clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of brown, red, and yellow

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loam, clay loam, or sandy clay loam

Maurepas Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Rapid
Parent material: Woody plant remains
Landform: Flood plains
Landform position: Depressions in backswamps
Slope: 0 to 1 percent
Taxonomic class: Euic, hyperthermic Typic Haplosaprists

Commonly Associated Soils

Arat, Axis, Handsboro, and Hyde soils are commonly associated with the Maurepas series.

- The Arat and Hyde soils are in positions similar to those of the Maurepas soils and do not have a histic epipedon.
- The Axis soils are in brackish or salt marshes and do not have a histic epipedon.
- The Handsboro soils are in brackish or salt marshes and have mineral layers in the subsurface and bottom tiers.

Typical Pedon

Maurepas muck, frequently flooded; about 2.0 miles north of the Moss Point paper mill; 900 feet north and 100 feet west of the southeast corner of sec. 9, T. 7 S., R. 5 W.

Oa1—0 to 8 inches; very dark grayish brown (10YR 3/2) muck; massive; very fluid; about 40 percent fibers unrubbed and about 20 percent fibers rubbed; moderately alkaline; clear smooth boundary.
Oa2—8 to 24 inches; very dark grayish brown (10YR 3/2) muck; massive; very fluid; about 25 percent fibers unrubbed and about 10 percent fibers rubbed; moderately alkaline; clear smooth boundary.
Oa3—24 to 36 inches; dark reddish brown (5YR 3/4) muck; massive; very fluid; about 20 percent fibers unrubbed and 10 percent fibers rubbed; common woody fragments; moderately alkaline; clear smooth boundary.
Oa4—36 to 54 inches; very dark grayish brown (10YR 3/2) muck; massive; very fluid; about 10 percent fiber rubbed and unrubbed; about 60 percent woody fragments; moderately alkaline.

Range in Characteristics

Thickness of organic material: More than 50 inches
Reaction: Slightly acid to moderately alkaline throughout the profile

Oa (surface tier):
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 or 2

Oa (subsurface and bottom tiers):
Color—hue of 5YR to 10YR, value of 2 or 3, and chroma of 1 to 4

Myatt Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy fluvial sediments
Landform: Low stream terraces
Landform position: Flats and swales
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, active, thermic Typic Endoaquults

Commonly Associated Soils

Daleville, Kinston, and Quitman soils are commonly associated with the Myatt series.

- The Daleville soils are in positions similar to those of the Myatt soils and do not have a significant decrease in clay content within a depth of 60 inches.
- The Kinston soils are in drainageways and do not have an argillic horizon.
- The somewhat poorly drained Quitman soils are in slightly higher, more convex positions than those of the Myatt soils.

Typical Pedon

Myatt loam, 0 to 1 percent slopes, occasionally flooded; about 3.0 miles east of Hurley; 1,300 feet north and 1,600 feet east of the southwest corner of sec. 25, T. 4 S., R. 5 W.

Ap—0 to 6 inches; very dark gray (10YR 3/1) loam; weak coarse granular structure; friable; many fine and medium roots; strongly acid; abrupt smooth boundary.
Eg—6 to 9 inches; dark grayish brown (10YR 4/2) loam; weak coarse subangular blocky structure; very friable; common very fine and fine roots; common coarse faint grayish brown (10YR 5/2) iron depletions; few medium faint yellowish brown (10YR 5/4) masses of iron accumulation; very strongly acid; clear wavy boundary.
BE—9 to 13 inches; grayish brown (10YR 5/2) loam; moderate medium subangular

blocky structure; friable; common fine and few medium roots; few medium prominent strong brown (7.5YR 4/6) and few fine faint yellowish brown (10YR 5/4) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg1—13 to 18 inches; gray (10YR 5/1) loam; moderate medium subangular blocky structure; friable; few medium roots; common faint clay films on faces of peds; common streaks of dark grayish brown (10YR 4/2) sandy loam in old root channels; many medium faint light yellowish brown (10YR 6/4) and few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2—18 to 30 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few medium roots; common distinct clay films on faces of peds; many coarse faint yellowish brown (10YR 6/4) and few medium prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg3—30 to 42 inches; light brownish gray (10YR 6/2) loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; friable; few medium roots; common distinct clay films on faces of peds; common streaks of dark grayish brown (10YR 4/2) sand and silt in old root channels; few medium distinct (10YR 6/8) brownish yellow masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4—42 to 50 inches; light brownish gray (2.5Y 6/2) loam; weak coarse prismatic structure; firm; few medium roots; common faint clay films on faces of peds; few thin seams of dark grayish brown (10YR 4/2) silt loam clay depletions between prisms; common medium faint olive brown (2.5Y 4/4) and common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

BC—50 to 59 inches; light brownish gray (2.5Y 6/2) sandy loam; weak coarse prismatic structure; friable; common faint clay films on faces of peds; very strongly acid; clear wavy boundary.

Cg1—59 to 63 inches; gray (10YR 6/1) fine sandy loam; massive; friable; very strongly acid; abrupt wavy boundary.

2Cg2—63 to 84 inches; gray (10YR 6/1) coarse sand; single grained; loose; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile

Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2

Eg or BE horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—silt loam, loam, or fine sandy loam

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—loam, clay loam, or sandy clay loam

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

Cg and 2Cg horizons:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2; or no dominant matrix color and multicolored in shades of gray, brown, yellow, and red
Texture—sand, sandy loam, fine sandy loam, or sandy clay loam

Newhan Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Very rapid
Parent material: Eolian sand
Landform: Barrier islands
Landform position: Dunes
Slope: 5 to 20 percent
Taxonomic class: Thermic, uncoated Typic Quartzipsamments

Commonly Associated Soils

Corolla and Duckston soils are commonly associated with the Newhan series.

- The moderately well drained Corolla soils are on the lower parts of dunes and in interdunal swales.
- The poorly drained Duckston soils are in depressions and swales between dunes.

Typical Pedon

Newhan fine sand, in an area of Newhan-Corolla complex, rolling; on the east side of Petit Bois Island; 700 feet north and 500 feet west of the southeast corner of sec. 35, T. 9 S., R. 5 W.

A—0 to 2 inches; dark grayish brown (10YR 4/2) fine sand; single grained; loose; common fine roots; slightly acid; clear wavy boundary.
C1—2 to 48 inches; light brownish gray (2.5Y 6/2) fine sand; single grained; loose; few fine roots; dark brown stains of iron and manganese oxide on about 5 percent of the sand grains; slightly alkaline; gradual wavy boundary.
C2—48 to 66 inches; light brownish gray (2.5Y 6/2) sand; single grained; loose; many fine fragments of mollusk shell; slightly alkaline; gradual wavy boundary.
C3—66 to 80 inches; gray (10YR 6/1) sand; single grained; loose; about 5 percent medium fragments of mollusk shell; slightly alkaline.

Range in Characteristics

Thickness of sandy material: More than 80 inches
Reaction: Slightly acid to slightly alkaline throughout the profile

A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 3

C horizon:
Color—hue of 10YR to 2.5Y, value of 5 to 8, and chroma of 1 or 2
Texture—sand or fine sand

Nugent Series

Depth class: Very deep
Drainage class: Excessively drained
Permeability: Moderately rapid
Parent material: Sandy alluvium
Landform: Flood plains
Landform position: Natural levees
Slope: 0 to 2 percent
Taxonomic class: Sandy, siliceous, thermic Typic Udifluvents

Commonly Associated Soils

Bigbee, Jena, Kinston, and Mantachie soils are commonly associated with the Nugent series.

- The Bigbee soils are in positions similar to those of the Nugent soils and do not have strata of loamy sediments in the substratum.
- The well drained Jena soils are in the slightly lower positions on natural levees.
- The poorly drained Kinston soils and somewhat poorly drained Mantachie soils are in the lower positions on natural levees and in backswamps.

Typical Pedon

Nugent loamy sand, in an area of Nugent and Jena soils, frequently flooded; about 1.1 miles south of the George County line; about 500 feet south and 2,300 feet west of the northeast corner of sec. 9, T. 4 S., R. 6 W.

Ap—0 to 6 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; many fine and common medium roots; very strongly acid; clear smooth boundary.

C1—6 to 16 inches; brown (10YR 5/3) loamy sand; massive; very friable; common fine and medium roots; very strongly acid; clear smooth boundary.

C2—16 to 30 inches; pale brown (10YR 6/3) loamy sand; massive; very friable; common fine and medium roots; very strongly acid; clear wavy boundary.

C3—30 to 46 inches; brown (10YR 4/3) fine sandy loam; massive; very friable; few fine roots; few thin strata of pale brown (10YR 6/3) loamy sand; few fine distinct strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

C4—46 to 60 inches; pale brown (10YR 6/3) sand; single grained; loose; few thin strata of loamy sand; very strongly acid.

Range in Characteristics

Reaction: Very strongly acid or strongly acid throughout the profile

Ap or A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 3 or 4

C horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 3 to 6
Texture—sand, loamy sand, or fine sandy loam

Ocilla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Sandy and loamy sediments
Landform: Low stream terraces
Landform position: Flat and slightly convex slopes
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

Commonly Associated Soils

Bigbee, Latonia, Myatt, and Smithton soils are commonly associated with the Ocilla series.

- The excessively drained Bigbee soils and well drained Latonia soils are in slightly higher, more convex positions than those of the Ocilla soils.
- The poorly drained Myatt soils are in the lower positions and do not have a thick, sandy epipedon.
- The poorly drained Smithton soils are in swales and drainageways.

Typical Pedon

Ocilla loamy sand, 0 to 2 percent slopes, occasionally flooded; 2,100 feet south and 2,300 feet west of the northeast corner of sec. 17, T. 4 S., R. 6 W.

Ap—0 to 10 inches; very dark gray (10YR 3/1) loamy sand; weak medium granular structure; very friable; common fine and medium roots; very strongly acid; abrupt smooth boundary.

E1—10 to 19 inches; grayish brown (10YR 5/2) loamy sand; weak coarse subangular blocky structure; very friable; common fine and medium roots; many coarse faint brown (10YR 5/3) and common medium distinct reddish yellow (7.5YR 6/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

E2—19 to 27 inches; light yellowish brown (10YR 6/4) loamy sand; weak coarse subangular blocky structure; very friable; few fine and medium roots; common medium distinct brown (7.5YR 5/4) masses of iron accumulation; very strongly acid; abrupt wavy boundary.

Btg1—27 to 33 inches; grayish brown (10YR 5/2) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btg2—33 to 52 inches; light gray (10YR 7/1) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common fine prominent brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg3—52 to 62 inches; light gray (10YR 7/1) sandy loam; weak medium subangular blocky structure; very friable; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

C—62 to 68 inches; very pale brown (10YR 7/4) sandy loam; massive; firm; common medium and coarse faint gray (10YR 6/1) streaks of sand; very strongly acid; gradual wavy boundary.

Cg—68 to 86 inches; light gray (10YR 7/1) sandy loam; massive; firm; common fine faint light olive brown (2.5Y 5/4) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout the profile, except in areas where lime has been added

Ap horizon:

Color—hue of 10YR, value of 3 or 4, and chroma of 1 or 2

E horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4

Texture—loamy sand or loamy fine sand

Redoximorphic features—few or common iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

Btg horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy loam, sandy clay loam, or clay loam

Redoximorphic features—common or many masses of iron accumulation in shades of brown, yellow, or red

C horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features—few to many iron depletions in shades of gray or brown and masses of iron accumulation in shades of brown or red

Cg horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of brown, yellow, or red

Poarch Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landform: Ridges
Landform position: Summits and side slopes
Slope: 2 to 5 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleudults

Commonly Associated Soils

Atmore, Benndale, Escambia, Malbis, and Smithton soils are commonly associated with the Poarch series.

- The poorly drained Atmore soils are in flat or depressional positions at slightly lower elevations than those of the Poarch soils.
- The Benndale and Malbis soils are in positions similar to those of the Poarch soils. Benndale soils have less than five percent plinthite in the subsoil. Malbis soils are fine-loamy.
- The somewhat poorly drained Escambia soils are in slightly lower, less convex positions than those of the Poarch soils.
- The poorly drained Smithton soils are in drainageways.

Typical Pedon

Poarch fine sandy loam, 2 to 5 percent slopes; about 1,400 feet south and 1,100 feet west of the northeast corner of sec. 8, T. 5 S., R. 7 W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; strongly acid; abrupt smooth boundary.
E—4 to 10 inches; light yellowish brown (10YR 6/4) fine sandy loam; weak coarse subangular blocky structure; very friable; common fine, medium, and coarse roots; about 5 percent fine and medium rounded concretions of ironstone; strongly acid; abrupt smooth boundary.
Bt1—10 to 18 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; few faint clay films on faces of peds; about 5 percent fine and medium rounded concretions of ironstone; strongly acid; gradual wavy boundary.
Bt2—18 to 27 inches; brownish yellow (10YR 6/8) sandy loam; weak medium

subangular blocky structure; very friable; few medium roots; common faint clay films on faces of peds; very strongly acid; clear wavy boundary.

Btv1—27 to 33 inches; brownish yellow (10YR 6/8) loam; weak medium subangular blocky structure; friable; few medium roots; common faint clay films on faces of peds; about 10 percent nodular plinthite; very strongly acid; gradual wavy boundary.

Btv2—33 to 50 inches; brownish yellow (10YR 6/8) loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; about 10 percent nodular plinthite; few thin streaks of clean sand; few medium faint very pale brown (10YR 7/4) iron depletions; very strongly acid; gradual wavy boundary.

Btv3—50 to 58 inches; light yellowish brown (2.5Y 6/4) loam; weak medium subangular blocky structure; friable; few distinct clay films on faces of peds; about 10 percent nodular plinthite; common medium faint light brownish gray (10YR 6/2) iron depletions; many coarse prominent red (2.5YR 4/6) and many fine and medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

BC—58 to 73 inches; 45 percent light gray (10YR 7/1), 25 percent strong brown (7.5YR 5/8), 20 percent dark red (10R 3/6), and 10 percent yellowish red (5YR 4/6) loam; weak very coarse subangular blocky structure; firm; few thin strata of clay loam and sandy loam; areas of strong brown, dark red, and yellowish red are masses of iron accumulation; areas of light gray are iron depletions; very strongly acid; gradual wavy boundary.

C—73 to 81 inches; 50 percent strong brown (7.5YR 5/8), 30 percent light gray (10YR 7/1), and 20 percent reddish brown (5YR 4/4) loam; massive; firm; common thin strata of clay loam and sandy loam; areas of strong brown and reddish brown are masses of iron accumulation; areas of light gray are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3

E horizon:

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

Texture—fine sandy loam, sandy loam, or loam

Bt horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or loam

Btv horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—sandy loam or loam

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

BC and C horizons: (where present)

Color—commonly no dominant matrix color and multicolored in shades of brown, red, gray, and yellow

Texture—sandy loam, loam, clay loam, or sandy clay loam; or stratified with textures ranging from sand to clay

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

Prentiss Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy sediments
Landform: Stream terraces
Landform position: Summits
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Glossic Fragiudults

Commonly Associated Soils

Benndale and Quitman soils are commonly associated with the Prentiss series.

- The well drained Benndale soils are in positions similar to those of the Prentiss soils and do not have a fragipan.
- The somewhat poorly drained Quitman soils are in the lower positions and are fine-loamy.

Typical Pedon

Prentiss silt loam, 0 to 2 percent slopes; about 2,300 feet west and 1,900 feet south of the northeast corner of sec. 3, T. 4 S., R. 5 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; weak medium granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt1—5 to 9 inches; brownish yellow (10YR 6/6) loam; weak medium subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—9 to 16 inches; brownish yellow (10YR 6/6) loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.

Bt3—16 to 23 inches; light yellowish brown (2.5Y 6/4) sandy loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; few medium faint light gray (10YR 7/2) iron depletions; very strongly acid; clear wavy boundary.

Btx1—23 to 34 inches; light yellowish brown (2.5Y 6/4) sandy loam; moderate very coarse prismatic structure parting to weak coarse subangular blocky; very firm; brittle and compact in about 65 percent of the volume; few fine roots in vertical seams between prisms; common faint clay films on faces of peds; common fine faint light brownish gray (10YR 6/2) iron depletions; common medium distinct brownish yellow (10YR 6/8) and few fine prominent strong brown (7.5YR 4/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Btx2—34 to 51 inches; brownish yellow (10YR 6/6) fine sandy loam; moderate very coarse prismatic structure parting to weak medium subangular blocky; firm; brittle and compact in about 70 percent of the volume; common faint clay films on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions; common fine prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid; clear smooth boundary.

Btx3—51 to 80 inches; 60 percent strong brown (7.5YR 5/8), 20 percent red (2.5 YR 5/8), and 20 percent light brownish gray (10YR 6/2) fine sandy loam; weak very coarse prismatic structure parting to weak medium subangular blocky; firm; brittle and compact in about 70 percent of the volume; few black iron and manganese oxide stains on faces of peds; areas of strong brown and red are masses of iron accumulation; areas of light brownish gray are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to fragipan: 20 to 32 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 6
Texture—sandy loam or loam

Btx horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8; or no dominant matrix color and multicolored in shades of brown, red, and gray
Texture—loam, fine sandy loam, or sandy loam

Quitman Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Parent material: Loamy sediments
Landform: Stream terraces
Landform position: Flat and slightly convex summits
Slope: 0 to 2 percent
Taxonomic class: Fine-silty, siliceous, semiactive, thermic Aquic Paleudults
Taxadjunct statement: The Quitman soils in this survey area are taxadjuncts to the Quitman series because the content of sand that is coarser than very fine sand in the particle-size control section is lower than is defined as the range of the series. This difference, however, does not significantly affect the use, management, or interpretations of the soils.

Commonly Associated Soils

Daleville, Prentiss, and Stough soils are commonly associated with the Quitman series.

- The poorly drained Daleville soils are in the slightly lower, less convex positions.
- The moderately well drained Prentiss soils are in the slightly higher positions and are coarse-loamy.
- The Stough soils are in positions similar to those of the Quitman soils and are coarse-loamy.

Typical Pedon

Quitman silt loam, 0 to 2 percent slopes; about 75 feet north of the Helena Ball Park fence; 900 feet north and 800 feet east of the southwest corner of sec. 30, T. 6 S., R. 5 W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; friable; common fine and medium roots; strongly acid; abrupt wavy boundary.
BE—7 to 11 inches; light olive brown (2.5Y 5/4) silt loam; weak fine subangular blocky structure; friable; common fine and very fine roots; few streaks and splotches of grayish brown (10YR 5/2) loam; few coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; clear smooth boundary.

Bt—11 to 22 inches; olive yellow (2.5Y 6/6) silt loam; moderate medium subangular blocky structure; friable; common fine roots; common distinct clay films on faces of peds; few fine distinct gray (10YR 6/1) iron depletions; few fine prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

Btx1—22 to 28 inches; 30 percent light olive brown (2.5Y 5/3), 30 percent gray (10YR 6/1), 25 percent olive yellow (2.5Y 6/6), and 15 percent red (2.5YR 5/6) silty clay loam; weak coarse prismatic structure that parts to moderate medium subangular blocky; firm; compact and brittle in 15 percent of the matrix; few fine roots; common distinct clay films on faces of peds; areas of olive yellow and red are masses of iron accumulation; areas of light olive brown and gray are iron depletions; strongly acid; clear smooth boundary.

Btx2—28 to 34 inches; yellowish brown (10YR 4/6) silty clay loam; weak coarse prismatic structure that parts to moderate medium subangular blocky; firm; compact and brittle in 20 percent of the matrix; common distinct clay films on faces of peds; common thin seams of gray (10YR 6/1) loam iron depletions between prisms; strongly acid; clear smooth boundary.

Btx3—34 to 46 inches; 35 percent gray (10YR 6/1), 25 percent reddish brown (2.5YR 4/4), 20 percent olive yellow (2.5Y 6/6), and 20 percent weak red (10R 4/4) clay loam; weak coarse prismatic structure that parts to moderate medium subangular blocky; firm; compact and brittle in 20 percent of the matrix; common distinct clay films on faces of peds; areas of reddish brown, olive yellow, and weak red are masses of iron accumulation; areas of gray are iron depletions; strongly acid; clear smooth boundary.

Btxg—46 to 65 inches; gray (10YR 6/1) clay loam; weak very coarse prismatic structure that parts to moderate medium subangular blocky; firm; compact and brittle in 15 percent of the matrix; many distinct clay films on faces of peds; common medium and coarse prominent red (2.5YR 4/8) and common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

A or Ap horizon:

Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 4

BE horizon: (where present)

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

Texture—loam or silt loam

Bt horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6

Texture—silt loam or silty clay loam

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

Btx horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6; or no dominant matrix color and multicolored in shades of brown, red, olive, and gray

Texture—silt loam or silty clay loam in the upper part; loam, clay loam, or sandy clay loam in the lower part

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

Btxg horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—loam, clay loam, or sandy clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of brown, red, or yellow

Ruston Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy sediments
Landform: Ridges
Landform position: Summits
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

Commonly Associated Soils

Benndale, Smithdale, and Wadley soils are commonly associated with the Ruston series.

- The Benndale soils are in positions similar to those of the Ruston soils and have a brownish subsoil.
- The Smithdale soils are on side slopes and do not have a bisequal profile.
- The Wadley soils are in positions similar to those of the Ruston soils and have a thick, sandy epipedon.

Typical Pedon

Ruston fine sandy loam, 0 to 2 percent slopes; about 0.5 mile southeast of the Carter Cemetery; 1,100 feet north and 100 feet west of the southeast corner of sec. 14, T. 4 S., R. 8 W.

Ap—0 to 6 inches; brown (10YR 5/3) fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.
E—6 to 11 inches; light yellowish brown (10YR 6/4) sandy loam; weak coarse subangular blocky structure; very friable; common fine roots; strongly acid; abrupt smooth boundary.
Bt1—11 to 20 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—20 to 30 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
B/E—30 to 36 inches; 75 percent red (2.5YR 4/6) loam (B); moderate medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; 25 percent yellowish brown (10YR 5/4) sandy loam (E) in streaks and pockets; weak medium subangular blocky structure; very friable; very strongly acid; clear wavy boundary.
B´t1—36 to 48 inches; yellowish red (5YR 4/6) clay loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
B´t2—48 to 62 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; few medium

distinct olive yellow (2.5Y 6/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

B´t3—62 to 80 inches; red (2.5YR 4/6) loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; many medium and coarse distinct olive yellow (2.5Y 6/6) and brownish yellow (10YR 6/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

BC—80 to 84 inches; brownish yellow (10YR 6/8) loam; weak very coarse subangular blocky structure; friable; common medium faint light yellowish brown (10YR 6/4) iron depletions and common fine distinct yellowish red (5YR 4/6) masses of iron accumulation that are relic redoximorphic features; extremely acid.

Range in Characteristics

Thickness of the solum: More 60 inches
Reaction: Very strongly acid to moderately acid throughout the profile, except for the surface layer in areas that have been limed

Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4

E horizon and E part of B/E horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4
Texture—sandy loam, fine sandy loam, or loamy sand

Bt horizon and B part of B/E horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 4 to 8
Texture—sandy clay loam, loam, or clay loam
Relic redoximorphic features (where present)—none to common iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown, yellow, or red

BC horizon: (where present)
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam, sandy loam, or sandy clay loam
Relic redoximorphic features (where present)—none to common iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown, yellow, or red

Saucier Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Loamy and clayey marine sediments
Landform: Ridges
Landform position: Summits
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Plinthaquic Paleudults

Commonly Associated Soils

Escambia, Malbis, and Susquehanna soils are commonly associated with the Saucier series.

- The somewhat poorly drained Escambia soils are in slightly lower, less convex positions than those of the Saucier soils and are coarse-loamy.

- The well drained Malbis soils are in slightly higher, more convex positions than those of the Saucier soils.
- The somewhat poorly drained Susquehanna soils are on adjacent side slopes and have a clayey argillic horizon.

Typical Pedon

Saucier fine sandy loam, 0 to 2 percent slopes; about 2.0 miles south of Harleston; 900 feet north and 100 feet east of the southwest corner of sec. 16, T. 4 S., R. 5 W.

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

BE—5 to 11 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; many fine roots; common fine spots and streaks of dark gray fine sandy loam; strongly acid; clear wavy boundary.

Bt—11 to 17 inches; brownish yellow (10YR 6/6) loam; moderate medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; few fine distinct yellowish red (5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btv1—17 to 27 inches; brownish yellow (10YR 6/6) loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; about 5 percent nodular plinthite; few fine faint pale brown (10YR 6/3) iron depletions; few medium prominent yellowish red (5YR 5/8) masses of iron accumulation; strongly acid; gradual smooth boundary.

Btv2—27 to 39 inches; brownish yellow (10YR 6/6) silty clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; about 10 percent nodular plinthite; few fine distinct light brownish gray (10YR 6/2) iron depletions; few medium prominent yellowish red (5YR 4/6) masses of iron accumulation; strongly acid; gradual smooth boundary.

2Btv3—39 to 47 inches; 45 percent light brownish gray (10YR 6/2), 30 percent red (2.5YR 4/8), 15 percent strong brown (7.5YR 5/8), and 10 percent brownish yellow (10YR 6/8) clay loam; moderate medium angular blocky structure; firm; few faint clay films on faces of peds; about 10 percent nodular plinthite; areas of light brownish gray are iron depletions; areas of red, strong brown, and brownish yellow are masses of iron accumulation; very strongly acid; gradual smooth boundary.

2Btv4—47 to 70 inches; 40 percent light gray (2.5Y 7/2), 30 percent red (10R 4/6), and 30 percent brownish yellow (10YR 6/8) clay loam; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; about 5 percent nodular plinthite; areas of light gray are iron depletions; areas of red and brownish yellow are masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

A or Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3

BE horizon: (where present)
Color—hue of 10YR, value of 4 to 6, and chroma of 4 to 6
Texture—sandy loam, fine sandy loam, or loam

Bt and Btv horizons:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8

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

2Btv horizon:
Color—no dominant matrix color and multicolored in shades of red, brown, yellow, and gray
Texture—clay, silty clay, clay loam, or sandy clay loam
Redoximorphic features—common or many iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown, red, or yellow

Smithdale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landform: Hillslopes
Landform position: Side slopes
Slope: 5 to 17 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Typic Hapludults

Commonly Associated Soils

Bama, Benndale, Boykin, Ruston, and Wadley soils are commonly associated with the Smithdale series.

- The Bama and Ruston soils are on summits and smooth side slopes and do not have a significant decrease in clay content within a depth of 60 inches.
- The Benndale soils are in positions similar to those of the Smithdale soils and have a brownish, coarse-loamy argillic horizon.
- The Boykin and Wadley soils are in positions similar to those of the Smithdale soils and have a thick, sandy epipedon.

Typical Pedon

Smithdale fine sandy loam, in an area of Smithdale-Boykin complex, 5 to 17 percent slopes; about 50 feet north of the Wilson Cemetery fence; 1,890 feet south and 2,430 feet west of the northeast corner of sec. 20., T. 4 S., R. 8 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; very strongly acid; abrupt smooth boundary.
E—5 to 13 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium granular structure; friable; common medium and coarse roots; very strongly acid; clear wavy boundary.
Bt1—13 to 28 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—28 to 36 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt3—36 to 42 inches; red (2.5YR 4/8) sandy clay loam; weak medium subangular blocky structure; friable; common faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt4—42 to 52 inches; yellowish red (5YR 5/6) sandy loam; weak coarse subangular

blocky structure; very friable; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt5—52 to 64 inches; yellowish red (5YR 5/6) sandy loam; weak coarse subangular blocky structure; very friable; few faint clay films on faces of peds; common medium faint yellowish brown (10YR 5/4) iron depletions that are relic redoximorphic features; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 to 3

E horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—fine sandy loam or sandy loam

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

Bt horizon, lower part:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—loam or sandy loam
Relic redoximorphic features—none to common iron or clay depletions in shades of brown and masses of iron accumulation in shades of brown or red

Smithton Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy sediments
Landform: Low stream terraces
Landform position: Flats, swales, and drainageways
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults

Commonly Associated Soils

Harleston, Johns, and Stough soils are commonly associated with the Smithton series.

- The moderately well drained Harleston soils are in slightly higher, more convex positions than those of the Smithton soils.
- The somewhat poorly drained Johns soils are in slightly higher positions than those of the Smithton soils and have a fine-loamy argillic horizon.
- The somewhat poorly drained Stough soils are in slightly higher positions than those of the Smithton soils and have fragic characteristics.

Typical Pedon

Smithton loam, 0 to 1 percent slopes, occasionally flooded; about 3.0 miles northwest of Vancleave; 350 feet north and 700 feet west of the southeast corner of sec. 36, T. 5 S., R. 8 W.

Ap—0 to 3 inches; grayish brown (10YR 5/2) loam; weak coarse granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.

Eg—3 to 15 inches; gray (10YR 5/1) sandy loam; weak coarse subangular blocky structure; very friable; common fine and medium roots; common fine distinct yellowish brown (10YR 5/4) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg1—15 to 27 inches; grayish brown (10YR 5/2) sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg2—27 to 38 inches; gray (10YR 5/1) sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; few faint clay films on faces of peds; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg3—38 to 54 inches; grayish brown (10YR 5/2) sandy loam; weak medium subangular blocky structure; friable; common distinct clay films on faces of peds; many medium distinct dark yellowish brown (10YR 4/6) and common fine prominent reddish yellow (7.5YR 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4—54 to 61 inches; grayish brown (10YR 5/2) sandy loam; weak medium subangular blocky structure; friable; common distinct clay films on faces of peds; few coarse distinct brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg5—61 to 71 inches; gray (10YR 6/1) sandy loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; common medium prominent yellowish red (5YR 5/8) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Cg—71 to 82 inches; light brownish gray (10YR 6/2) sandy loam; massive; many coarse distinct yellowish brown (10YR 5/6) and few medium faint light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

Ap horizon:

Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2

Eg horizon:

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

Texture—sandy loam, fine sandy loam, or loam

Btg horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy loam, fine sandy loam, or loam

Redoximorphic features—few to many masses of iron accumulation in shades of brown, yellow, or red

Cg horizon: (where present)

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2

Texture—sandy loam, loam, or sandy clay loam

Redoximorphic features—few to many masses of iron accumulation in shades of brown, yellow, or red

Stough Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Parent material: Loamy sediments
Landform: Stream terraces
Landform position: Flat and slightly concave slopes on summits
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults

Commonly Associated Soils

Daleville, Harleston, and Quitman soils are commonly associated with the Stough series.

- The poorly drained Daleville soils are in slightly lower, less convex positions than those of the Stough soils and are fine-loamy.
- The moderately well drained Harleston soils are in slightly higher, more convex positions than those of the Stough soils.
- The Quitman soils are in positions similar to those of the Stough soils and are fine-loamy.

Typical Pedon

Stough loam, 0 to 2 percent slopes; 1,000 feet south and 1,800 feet west of the northeast corner of sec. 28, T. 5 S., R. 8 W.

A—0 to 5 inches; very dark gray (10YR 3/1) loam; weak medium granular structure; very friable; common fine, medium, and coarse roots; very strongly acid; abrupt smooth boundary.

E—5 to 8 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak coarse subangular blocky structure; very friable; few fine and medium roots; common fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

EB—8 to 12 inches; light yellowish brown (2.5Y 6/4) sandy loam; weak medium subangular blocky structure; very friable; few fine roots; common medium faint light brownish gray (2.5Y 6/2) iron depletions; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bt—12 to 30 inches; light yellowish brown (2.5Y 6/4) loam; moderate coarse subangular blocky structure; friable; common faint clay films on faces of peds; few medium prominent reddish gray (5YR 5/2) iron depletions; common fine distinct brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btx1—30 to 36 inches; light olive brown (2.5Y 5/4) loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; compact and brittle in 50 percent of the matrix; common faint clay films on faces of peds; few coarse distinct dark grayish brown (10YR 4/2) iron depletions; common medium faint light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btx2—36 to 48 inches; brownish yellow (10YR 6/6) sandy clay loam; moderate coarse prismatic structure; firm; compact and brittle in 55 percent of the matrix; common faint clay films on faces of peds; common fine and medium distinct gray (10YR 6/1) iron depletions; common medium faint brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btx3—48 to 58 inches; 45 percent gray (10YR 6/1), 35 percent brownish yellow (10YR 6/8), and 20 percent strong brown (7.5YR 5/6) loam; weak coarse prismatic structure; firm; compact and brittle in 55 percent of the matrix; common faint clay films on faces of peds; areas of brownish yellow and strong brown are masses of iron accumulation; areas of gray are iron depletions; very strongly acid; clear wavy boundary.

Btx4—58 to 69 inches; light yellowish brown (10YR 6/4) sandy loam; weak coarse prismatic structure; firm; brittle in 40 percent of the matrix; few faint clay films on faces of peds; common fine distinct gray (10YR 6/1) iron depletions; common coarse prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; strongly acid; gradual wavy boundary.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas where lime has been added

A or Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 1 or 2

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

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

Btx horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 6; or no dominant matrix color and multicolored in shades of red, gray, brown, and yellow
Texture—sandy loam, loam, or sandy clay loam
Redoximorphic features—common or many iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown, yellow, or red

Suffolk Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy sediments
Landform: Ridges
Landform position: Summits
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Hapludults

Commonly Associated Soils

Benndale, Eustis, and Smithton soils are commonly associated with the Suffolk series.

- The Benndale soils are in positions similar to those of the Suffolk soils and are coarse-loamy.

- The excessively drained Eustis soils are on side slopes adjacent to the Suffolk soils and are sandy throughout the profile.
- The poorly drained Smithton soils are in shallow drainageways.

Typical Pedon

Suffolk loamy sand, 0 to 2 percent slopes; about 4.0 miles east of Harleston; 2,600 feet north and 200 feet west of the southeast corner of sec. 11, T. 5 S., R. 5 W.

Ap—0 to 6 inches; brown (10YR 5/3) loamy sand; weak coarse granular structure; very friable; many fine and medium roots; few thin streaks of light yellowish brown (2.5Y 6/4) sandy loam; strongly acid; abrupt smooth boundary.

BE—6 to 9 inches; light yellowish brown (2.5Y 6/4) fine sandy loam; weak fine subangular blocky structure; very friable; common fine and medium roots; strongly acid; clear wavy boundary.

Bt1—9 to 19 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; common fine and many medium roots; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—19 to 28 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; friable; common fine and few coarse roots; common faint clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt3—28 to 34 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; few fine prominent yellowish red (5YR 5/8) masses of iron accumulation that are relic redoximorphic features; very strongly acid; clear wavy boundary.

BC—34 to 37 inches; olive yellow (2.5Y 6/6) fine sandy loam; weak coarse subangular blocky structure; very friable; common thin streaks of clean sand; few fine prominent red (2.5YR 5/6) masses of iron accumulation that are relic redoximorphic features; very strongly acid; gradual wavy boundary.

2C1—37 to 72 inches; pale yellow (2.5Y 7/4) loamy fine sand; massive; very friable; very strongly acid; clear wavy boundary.

2C2—72 to 86 inches; pale yellow (2.5Y 7/3) fine sand; loose; common coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 50 inches
Reaction: Extremely acid to moderately acid throughout the profile, except for the surface layer in areas where lime has been added

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

BE horizon: (where present)
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4
Texture—fine sandy loam, sandy loam, or loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—loam or sandy clay loam

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

2C horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sand, fine sand, loamy fine sand, or loamy sand

Susquehanna Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey marine sediments
Landform: Ridges and hillslopes
Landform position: Summits and side slopes
Slope: 1 to 12 percent
Taxonomic class: Fine, smectitic, thermic Vertic Paleudalfs

Commonly Associated Soils

Freest, Saucier, Smithdale, and Smithton soils are commonly associated with the Susquehanna series.

- The loamy Freest and Saucier soils are in slightly higher positions than those of the Susquehanna soils.
- The loamy Smithdale soils are in positions similar to those of the Susquehanna soils.
- The poorly drained Smithton soils are in drainageways.

Typical Pedon

Susquehanna silt loam, in an area of Susquehanna-Freest complex, 1 to 5 percent slopes; about 2 miles north of Larue on the Larue Dantzler Road; 1,500 feet south and 2,600 feet east of the northwest corner of sec. 35, T. 4 S., R. 9 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; weak coarse granular structure; very friable; many fine and medium roots; very strongly acid; abrupt smooth boundary.

Bt—5 to 11 inches; light brown (7.5YR 6/4) clay; moderate medium subangular blocky structure; firm; many fine roots; few faint clay films on faces of peds; few fine faint light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear smooth boundary.

Btss1—11 to 23 inches; strong brown (7.5YR 5/6) clay; moderate medium subangular blocky structure; firm; many fine roots; few faint clay films on faces of peds; few large slickensides that have distinct polished and grooved surfaces; few medium distinct light brownish gray (10YR 6/2) iron depletions; common medium prominent red (2.5YR 4/6) and common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; abrupt wavy boundary.

Btss2—23 to 34 inches; 50 percent yellowish red (5YR 5/6), 20 percent brownish yellow (10YR 6/6), 15 percent light brownish gray (10YR 6/2), and 15 percent red (2.5YR 4/6) clay; moderate medium angular blocky structure parting to strong fine angular blocky; firm; few faint clay films on faces of peds; few large slickensides that have distinct polished and grooved surfaces; areas of yellowish red, brownish yellow, and red are masses of iron accumulation; areas of light brownish gray are iron depletions; very strongly acid; gradual wavy boundary.

Btss3—34 to 39 inches; 40 percent yellowish red (5YR 5/6), 20 percent gray (10YR 6/1), 20 percent yellowish brown (10YR 5/6), and 20 percent red (2.5YR 4/6) silty clay; moderate medium angular blocky structure parting to strong fine angular blocky; firm; few faint clay films on faces of peds; few large slickensides that have polished and grooved surfaces; areas of yellowish red, yellowish brown, and red are masses of iron accumulation; areas of gray are iron depletions; very strongly acid; gradual wavy boundary.

Btss4—39 to 45 inches; 45 percent light brownish gray (10YR 6/2), 25 percent red (2.5YR 4/6), 20 percent red (10R 4/6), and 10 percent brownish yellow (10YR 6/6) silty clay; strong medium angular blocky structure; firm; few faint clay films on faces of peds; few large intersecting slickensides that have polished and grooved surfaces; areas of red and brownish yellow are masses of iron accumulation; areas of light brownish gray are iron depletions; very strongly acid; gradual wavy boundary.

Btssg1—45 to 59 inches; gray (10YR 6/1) silty clay; weak coarse angular blocky structure parting to strong fine and medium angular blocky; very firm; few faint clay films on faces of peds; common large intersecting slickensides that have distinct polished and grooved surfaces; many fine and medium prominent red (10R 4/6), weak red (10R 4/4), and strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btssg2—59 to 80 inches; gray (10YR 6/1) silty clay; weak coarse angular blocky structure parting to strong medium angular blocky; very firm; few faint clay films on faces of peds; common large intersecting slickensides that have distinct polished and grooved surfaces; many fine and medium distinct brownish yellow (10YR 6/6) and few fine prominent red (10R 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed

A or Ap horizon:
Color—hue of 10YR, value of 3 or 4, and chroma of 2 or 3

Bt and Btss horizons:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of gray, red, and brown
Texture—commonly silty clay or clay but includes silty clay loam
Redoximorphic features—few to many iron depletions in shades of gray or brown and few to many masses of iron accumulation in shades of red, yellow, or brown

Btssg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—commonly silty clay or clay but includes silty clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of red or brown

Vancleave Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Loamy marine sediments
Landform: Marine terraces
Landform position: Summits and side slopes
Slope: 0 to 8 percent
Taxonomic class: Coarse-loamy, siliceous, semiactive, thermic Plinthic Fragiudults

Commonly Associated Soils

Escambia, Eustis, Saucier, and Smithton soils are commonly associated with the Vancleave series.

- The somewhat poorly drained Escambia soils are in slightly lower positions than those of the Vancleave soils and do not have a fragipan.
- The excessively drained Eustis soils are in higher positions than those of the Vancleave soils and are sandy throughout.
- The Saucier soils are in positions similar to those of the Vancleave soils and are fine-loamy.
- The poorly drained Smithton soils are in drainageways.

Typical Pedon

Vancleave loamy sand, 0 to 2 percent slopes; about 2.0 miles southeast of Hurley; 1,500 feet west and 75 feet north of the southeast corner of sec. 9, T. 5 S., R. 5 W.

Ap—0 to 5 inches; very dark gray (10YR 3/1) loamy sand; weak medium granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

EA—5 to 11 inches; light yellowish brown (10YR 6/4) loamy sand; weak medium granular structure; very friable; few fine and medium roots; common spots and streaks of very dark gray (10YR 3/1) loamy sand; strongly acid; clear smooth boundary.

Bt—11 to 22 inches; light olive brown (2.5Y 5/4) sandy loam; weak coarse subangular blocky structure; very friable; common faint clay films on faces of peds; very strongly acid; clear smooth boundary.

Btx—22 to 31 inches; brownish yellow (10YR 6/6) sandy loam; weak coarse prismatic structure parting to weak medium subangular blocky; firm; brittle in about 10 percent of the matrix; few fine and medium roots; common distinct clay films on faces of peds; common medium distinct light brownish gray (10YR 6/2) iron depletions; common medium faint strong brown (7.5YR 5/6) and few fine faint yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

B/E—31 to 44 inches; 85 percent fine sandy loam (B), strong brown (7.5YR 5/6) interior, brownish yellow (10YR 6/6) exterior; weak very coarse prismatic structure parting to moderate medium subangular blocky; firm; brittle in about 60 percent of the matrix; few fine roots in seams between prisms; common faint clay films on faces of peds; few medium nodules of ironstone; common medium masses of nodular plinthite; about 15 percent light brownish gray (10YR 6/2) loamy fine sand in seams between prisms; massive; very friable; common fine distinct light brownish gray (10YR 6/2) iron depletions within the matrix; common fine faint yellowish brown (10YR 5/6) masses of iron accumulation within the matrix; very strongly acid; clear wavy boundary.

Btvx—44 to 51 inches; brownish yellow (10YR 6/6) sandy loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; brittle in about 65 percent of the matrix; few fine roots in seams between prisms; common faint clay films on faces of peds; many medium masses of nodular plinthite; common distinct gray (10YR 5/1) clay depletions in thin seams between prisms; common medium and coarse faint olive yellow (2.5Y 6/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btvxg—51 to 71 inches; light gray (10YR 7/1) sandy clay loam; moderate very coarse prismatic structure parting to moderate medium subangular blocky; very firm; brittle in about 65 percent of the matrix; common faint clay films on faces of peds; many medium masses of nodular plinthite; common faint gray (10YR 5/1) clay depletions in thin seams between prisms; common medium prominent yellowish brown (10YR 5/6) and many coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

B´tvx—71 to 84 inches; dark brown (7.5YR 4/4) fine sandy loam; weak very coarse prismatic structure parting to moderate coarse subangular blocky; very firm; brittle in about 65 percent of the matrix; common faint clay films on faces of peds; common coarse masses of nodular plinthite; common prominent gray (10YR 5/1) clay depletions in thin seams between prisms; many coarse prominent light gray (10YR 7/1) iron depletions and common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation within the matrix; strongly acid; gradual wavy boundary.

BC—84 to 90 inches; brownish yellow (10YR 6/8) fine sandy loam; massive; firm; common coarse distinct light gray (10YR 7/1) iron depletions; strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Extremely acid to strongly acid throughout the profile, except for the surface layer in areas where lime has been added

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

EA horizon and E part of the B/E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or loam
Redoximorphic features—none or few iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown or red

Btx and Btvx horizons and the B part of B/E horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or loam
Redoximorphic features—few to many iron depletions in shades of brown or gray and masses of iron accumulation in shades of brown or red

Btvxg horizon: (where present)
Color—hue of 10YR, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam, loam, fine sandy loam, or sandy loam
Redoximorphic features—few to many masses of iron accumulation in shades of brown or red

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

Wadley Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid in the surface and subsurface layers and moderate in the subsoil
Parent material: Sandy and loamy marine sediments
Landform: Ridges
Landform position: Summits
Slope: 0 to 5 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Grossarenic Paleudults

Commonly Associated Soils

Bama, Benndale, Boykin, Smithdale, and Smithton soils are commonly associated with the Wadley series.

- The Bama and Benndale soils are in positions similar to those of the Wadley soils and do not have a thick, sandy epipedon.
- The Boykin and Smithdale soils are on side slopes adjacent to the Wadley soils. Boykin soils have a sandy epipedon that is 20 to 40 inches thick. Smithdale soils do not have a thick, sandy epipedon.
- The poorly drained Smithton soils are in drainageways.

Typical Pedon

Wadley loamy sand, 0 to 5 percent slopes; about 1.0 mile southeast of Good Hope Church; 2,100 feet south and 500 feet east of the northwest corner of sec. 13, T. 4 S., R. 6 W.

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

E1—2 to 13 inches; yellowish brown (10YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; common fine and few medium roots; few thin streaks of clean sand; very strongly acid; clear smooth boundary.

E2—13 to 25 inches; brownish yellow (10YR 6/6) loamy sand; weak coarse subangular blocky structure; very friable; common fine and few medium roots; few fine spots of yellowish brown (10YR 5/6) loamy sand; very strongly acid; clear wavy boundary.

E3—25 to 32 inches; yellowish brown (10YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; few very fine, fine, and medium roots; very strongly acid; gradual wavy boundary.

E4—32 to 52 inches; yellowish brown (10YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; many thin streaks of clean sand; very strongly acid; gradual wavy boundary.

E/B—52 to 72 inches; 70 percent pale brown (10YR 6/3) fine sand (E); single grained; loose; 30 percent brownish yellow (10YR 6/6) loamy fine sand (B); weak coarse subangular blocky structure; very friable; sand grains are bridged and coated with clay; about 5 percent fine, rounded pebbles of quartzite; common medium prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bt—72 to 83 inches; light yellowish brown (10YR 6/4) sandy loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; about 2 percent nodular plinthite; very strongly acid; clear wavy boundary.

Btv1—83 to 90 inches; brownish yellow (10YR 6/6) sandy clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; about 10 percent nodular plinthite; few medium distinct light gray (10YR 7/1) iron depletions; many medium prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btv2—90 to 100 inches; 30 percent brownish yellow (10YR 6/6), 30 percent dark grayish brown (2.5Y 4/2), 20 percent light gray (10YR 7/1), and 20 percent light olive brown (2.5Y 5/4) sandy clay loam; weak coarse subangular blocky structure; friable; common faint clay films on faces of peds; about 10 percent nodular plinthite; areas of brownish yellow and light olive brown are masses of iron accumulation; areas of light gray and dark grayish brown are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 70 inches
Reaction: Very strongly acid to moderately acid throughout the profile, except in areas where limed has been added

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

E horizon and E part of the E/B horizon:
Color—hue of 10YR, value of 5 or 6, and chroma of 4 to 6
Texture—fine sand, loamy sand, or loamy fine sand

Bt horizon and B part of the E/B horizon:
Color—hue of 2.5YR to 10YR, value of 5 or 6, and chroma of 4 to 6
Texture—sandy clay loam, fine sandy loam, or sandy loam

Btv horizon: (where present)
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or no dominant matrix color and multicolored in shades of brown, red, and gray
Texture—sandy clay loam or sandy loam

Formation of the Soils

In this section the factors of soil formation are described and related to the soils of Jackson County. In addition, the processes of soil formation are described.

Factors of Soil Formation

Soil is the product of the combined effects of parent material, climate, plant and animal life, relief, and time. The characteristics of a soil at any place depend upon a combination of these five environmental factors at that particular place. All of these factors affect the formation of every soil. In many places, however, one or two of the factors are dominant in forming the properties of a particular soil.

Parent Material

Parent material is the unconsolidated geologic material in which a soil develops. It largely determines the chemical and mineral composition of the soils. Most of the soils in Jackson County formed in unconsolidated beds of fine- to coarse-textured Coastal Plain sediments (Brown, 1944). Some soils formed in alluvium; others formed in deposits of highly decomposed herbaceous plant remains periodically flooded by high tides in areas adjoining saltwater or brackish water. Beaches were deposited by the action of the tides, waves, and currents of the sea or by hydraulic dredges.

The bright colored soils of Jackson County developed from material that was above the ground-water level and was subject to the influence of water that percolated down through the surface. The grayish soils formed in low, flat areas where the water table is high and drainage is poor.

Soils that formed in place from Coastal Plain sediments are throughout the county. These sediments consist of sand, silt, and clay. Slopes are nearly level to moderately steep.

Soils that formed in alluvium that washed from upland soils are along the larger streams. These soils dominantly have sandy textures. Soils on first bottoms have a weakly defined profile because floodwaters continue to deposit fresh soil material.

Soils that formed in organic materials are in tidal marshes at low elevations adjoining brackish water. These soils are still forming as the grassy vegetation decomposes. The reaction and content of soluble salts in these soils are about the same as in seawater. Subsequent flooding does not completely remove the concentration of salts and bases resulting from the evaporation and transpiration processes.

Climate

The warm, moist climate of Jackson County has favored rapid development of soils. Warm temperatures accelerate the growth of many kinds of organisms and the rate of chemical reactions. The relatively high precipitation leaches the soluble material, such as bases, and accelerates the translocation of less soluble material, such as colloidal matter, downward through the profile. As a result, most of the soils are strongly leached and have strongly expressed horizons. For more information about the climate of Jackson County, see the section "General Nature of the County."

Plant and Animal Life

Plants, animals, and microorganisms that live on and in the soil are important in the formation of soils. Bacteria, fungi, and other microorganisms help break down and decompose organic matter. They are mostly in the uppermost few inches of the soil. Earthworms and other small invertebrates are mostly in the surface layer. Crayfish dig into the subsoil of the wetter soils. Together, the earthworms, other invertebrates, and crayfish continually mix the soil material. Plants alter the soil microclimate, supply organic matter, and transfer minerals from the subsoil to the surface layer.

People have, in places, greatly altered the surface layer and changed the soil environment by clearing forests, cultivating the soil, and introducing new plants. Fertilizers, lime, and various chemicals for control of insects, diseases, and weeds are added to the soil. Soil formation is also affected by the construction of levees and dams for flood control, by drainage, and by conservation practices.

The native trees of the well drained uplands are mainly longleaf pine and slash pine. The broad, wet flats support mainly loblolly pine, slash pine, sweetgum, and sweetbay. The better drained bottomlands support mainly loblolly pine, slash pine, spruce pine, oaks, magnolia, holly, and beech. Native plants in old sloughs and depressional areas include swamp tupelo, sweetgum, baldcypress, and sweetbay.

Relief

In Jackson County, the relief is of such low intensity that differences in microclimate are not of great importance to soil formation. Soils on north slopes are similar to soils on south slopes. On many side slopes, the soils are not much different from the soils on summits. The southern part of the county is low and mostly nearly level. It is known locally as the "Flatwoods." The drainage is poor or very poor, and runoff is very slow. During the wet seasons, the lower, flat areas have water at the surface. In the northern part of the county, the elevation gradually increases and culminates in a series of ridges. The upland parts of the county are much better drained than the Flatwoods; the relief is greater and the streams have developed definite valleys. The soils in the uplands have more clearly expressed horizons than those in the Flatwoods. The soils on summits and side slopes have less organic matter in the surface layer and have been more affected by oxidation of iron and by translocation of silicate clay minerals than associated soils at the base of slopes and in draws and depressions.

Time

Time is necessary for the development of soils from parent material. A long time is generally required for the formation of distinct horizons in soils. The length of time required for a mature soil to develop depends largely on the other factors of soil formation. Young soils have a weakly developed profile and retain most of the characteristics of the parent material except for the darkening of the surface layer. Old soils have well defined horizons that are far removed from the parent material in which they developed.

In Jackson County, the Flatwoods date from the Pleistocene epoch and the upper part of the Coastal Plain dates from the Miocene.

Processes of Horizon Formation

Several processes were involved in the formation of horizons in the soils of Jackson County. These processes are accumulation of organic matter; leaching of calcium carbonates and bases; liberation, reduction, and transfer of iron; and formation and translocation of silicate clay minerals. In most soils more than one of these processes have been active in the development of horizons.

Accumulation of organic matter in the upper part of the soil profile contributes to the formation of an A horizon. In Jackson County, the soils on well drained uplands have a low content of organic matter and the soils in the marshes have a high content of organic matter. Carbonates and bases have been leached from nearly all the soils. Most are moderately to strongly leached. Leaching of bases from the upper horizons of a soil commonly precedes the translocation of silicate clay.

Translocation of silicate clay has occurred in many of the soils. Translocation of clay minerals contributes to the development of an eluviated E horizon that contains less clay and is generally lighter in color than the B horizon. The B horizon commonly has accumulations of clay as films, in pores, and on the surface of peds. Saucier soils, for example, have films of translocated clay in the B horizon.

Gleying, which is the reduction, segregation, and transfer of iron, is evident in the poorly drained soils in the county. Reduction and loss of iron are indicated by gray colors in the subsoil. Segregation of iron is indicated by reddish or brownish mottles and concretions.

References

American Association of State Highway and Transportation Officials (AASHTO). 2000. Standard specifications for transportation materials and methods of sampling and testing. 20th edition, 2 volumes.

American Society for Testing and Materials (ASTM). 2001. Standard classification of soils for engineering purposes. ASTM Standard D 2487–00.

Brown, Glen F., and others. 1944. Geology and ground water resources of the coastal area in Mississippi. Mississippi State Geological Survey, Bulletin 60.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS–79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. February 24, 1995. Hydric soils of the United States.

Harvey, Edward J., Harold G. Golden, and J.G. Jeffery. 1965. Water resources of the Pascagoula Area, Mississippi. Geological Water Supply Paper 1763.

Holloman, Cathy Z. 1994. Bell Fontaine, Jackson County, Mississippi: Human history, geology, and shoreline erosion. Mississippi Office of Geology, Bulletin 130.

Hurt, G.W., P.M. Whited, and R.F. Pringle, editors. Version 4.0, 1998. Field indicators of hydric soils in the United States.

Minshew, Velon H., Conrad A. Gassier, Lynn P. Malbrough, and Thomas H. Waller. 1973. Environmental geology analysis, Jackson County, Mississippi.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2003. Keys to soil taxonomy. 9th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y–87–1.

United States Department of Agriculture. 1964. Soil survey of Jackson County, Mississippi. Soil Conservation Service. Series 1960, No. 18.

United States Department of Agriculture. 1978a. Forest statistics for Mississippi Counties. Forest Service Research Bulletin SO–69.

United States Department of Agriculture. 1978b. Mississippi forests—trends and outlook. Forest Service Research Bulletin SO–67.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. (http://soils.usda.gov)

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

United States Department of Commerce, Bureau of Census. 1997. Census of agriculture.

Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.
Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.
Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.
Bottom land. The normal flood plain of a stream, subject to flooding.
Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.
Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
Canopy. The leafy crown of trees or shrubs. (See Crown.)
Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.
Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.
Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.
Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.
Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
Coarse textured soil. Sand or loamy sand.
COLE (coefficient of linear extensibility). See Linear extensibility.
Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them

separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. 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.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

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.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

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.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.
Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.
Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.
Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.
Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.
Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

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;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

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.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

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.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

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.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

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
Very gently sloping	1 to 3 percent
Gently sloping	2 to 5 percent
Moderately sloping	5 to 8 percent
Strongly sloping	8 to 17 percent

Classes for complex slopes are as follows:

Level	0 to 1 percent
Nearly level	0 to 2 percent
Gently undulating	0 to 5 percent
Undulating	5 to 8 percent
Gently rolling	5 to 12 percent
Rolling	2 to 20 percent

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

[Recorded in the period 1971-2000 at Pascagoula, Mississippi]

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average	Maximum temp. higher than--	Minimum temp. lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	*°F*	*°F*	*°F*	*°F*	*Units*	*In*	*In*	*In*		*In*
January----	60.0	41.2	50.6	74	18	127	6.00	2.69	8.73	6	0.0
February---	63.2	43.9	53.6	77	23	159	5.19	1.72	8.39	5	0.0
March------	69.2	50.9	60.0	81	29	326	6.22	4.10	8.19	6	0.0
April------	75.7	57.3	66.5	87	37	486	4.50	1.55	6.92	4	0.0
May--------	82.6	65.2	73.9	92	48	734	5.82	2.22	8.91	5	0.0
June-------	87.7	71.6	79.7	96	59	888	5.37	1.93	8.87	6	0.0
July-------	89.8	73.8	81.8	99	66	983	7.29	3.33	11.24	9	0.0
August-----	89.6	73.2	81.4	98	64	965	6.47	3.22	9.52	8	0.0
September--	86.6	69.1	77.9	96	52	824	6.52	2.38	9.61	6	0.0
October----	78.9	58.0	68.4	89	38	569	3.70	0.72	6.41	3	0.0
November---	70.0	50.1	60.1	83	30	315	5.04	2.12	7.67	5	0.0
December---	62.8	43.6	53.2	78	20	177	4.30	3.02	5.20	5	0.0
Yearly:											
Average---	76.3	58.2	67.2	---	---	---	---	---	---	---	---
Extreme---	104	6	---	100	15	---	---	---	---	---	---
Total-----	---	---	---	---	---	6,553	66.42	55.24	76.81	68	0.0

* 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 Pascagoula, Mississippi]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Feb. 19	Mar. 4	Mar. 19
2 years in 10 later than--	Feb. 8	Feb. 24	Mar. 11
5 years in 10 later than--	Jan. 14	Feb. 8	Feb. 26
First freezing temperature in fall:			
1 year in 10 earlier than--	Dec. 14	Nov. 20	Nov. 9
2 years in 10 earlier than--	Dec. 29	Dec. 1	Nov. 18
5 years in 10 earlier than--	Feb. 1	Dec. 22	Dec. 4

Table 3.--Growing Season

[Recorded in the period 1971-2000 at Pascagoula, Mississippi]

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	*Days*	*Days*
9 years in 10	319	273	251
8 years in 10	351	289	262
5 years in 10	>365	318	283
2 years in 10	>365	346	305
1 year in 10	>365	362	316

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
2	Kinston, Chastain, and Mantachie soils, frequently flooded	38,171	7.9
3	Atmore loam, 1 to 3 percent slopes	18,466	3.8
4	Lenoir silt loam, 0 to 1 percent slopes	5,875	1.2
5	Benndale fine sandy loam, 0 to 2 percent slopes	8,413	1.7
6	Benndale fine sandy loam, 2 to 5 percent slopes	19,025	3.9
8	Latonia loamy sand, 0 to 2 percent slopes, occasionally flooded	1,452	0.3
12	Arat mucky silt loam, 0 to 1 percent slopes, frequently flooded	7,100	1.5
13	Daleville silt loam, 0 to 1 percent slopes	5,588	1.2
14	Daleville loam, ponded	1,481	0.3
16	Eustis loamy sand, 2 to 5 percent slopes	9,723	2.0
17	Eustis loamy sand, 5 to 12 percent slopes	2,991	0.6
18	Eustis loamy sand, 12 to 17 percent slopes	991	0.2
21	Bigbee loamy sand, 0 to 5 percent slopes, occasionally flooded	570	0.1
22	Myatt loam, 0 to 1 percent slopes, occasionally flooded	2,594	0.5
24	Hyde silt loam	12,176	2.5
25	Quitman silt loam, 0 to 2 percent slopes	806	0.2
26	Smithton loam, 0 to 1 percent slopes, occasionally flooded	17,871	3.7
27	Johns loamy fine sand, 0 to 2 percent slopes	2,917	0.6
28	Vancleave loamy sand, 0 to 2 percent slopes	15,870	3.3
29	Vancleave loamy sand, 2 to 5 percent slopes	11,360	2.3
30	Vancleave loamy sand, 5 to 8 percent slopes	776	0.2
32	Escambia very fine sandy loam, 0 to 2 percent slopes	2,774	0.6
33	Escambia very fine sandy loam, 2 to 5 percent slopes	3,471	0.7
36	Smithdale-Boykin complex, 5 to 17 percent slopes	7,890	1.6
44	Malbis fine sandy loam, 0 to 2 percent slopes	5,772	1.2
45	Malbis fine sandy loam, 2 to 5 percent slopes	11,234	2.3
48	Suffolk loamy sand, 0 to 2 percent slopes	1,599	0.3
50	Ruston fine sandy loam, 0 to 2 percent slopes	4,296	0.9
51	Bama fine sandy loam, 0 to 2 percent slopes	4,238	0.9
52	Bama fine sandy loam, 2 to 5 percent slopes	1,522	0.3
53	Bama fine sandy loam, 5 to 8 percent slopes	591	0.1
55	Ocilla loamy sand, 0 to 2 percent, occasionally flooded	5,796	1.2
56	Benndale fine sandy loam, 3 to 8 percent slopes	11,079	2.3
57	Poarch fine sandy loam, 2 to 5 percent slopes	8,515	1.8
58	Benndale fine sandy loam, 8 to 12 percent slopes	2,756	0.6
62	Prentiss silt loam, 0 to 2 percent slopes	2,777	0.6
63	Stough loam, 0 to 2 percent slopes	4,304	0.9
66	Freest sandy loam, 2 to 5 percent slopes	9,599	2.0
68	Saucier fine sandy loam, 0 to 2 percent slopes	5,337	1.1
76	Nugent and Jena soils, frequently flooded	6,962	1.4
78	Susquehanna-Freest complex, 1 to 5 percent slopes	7,107	1.5
79	Susquehanna-Freest complex, 5 to 8 percent slopes	7,075	1.5
80	Susquehanna silt loam, 8 to 12 percent slopes	1,400	0.3
84	Wadley loamy sand, 0 to 5 percent slopes	3,853	0.8
85	Leon mucky sand, 0 to 1 percent slopes	250	*
88	Croatan and Johnston soils, frequently flooded	39,918	8.2
89	Udorthents	5,869	1.2
90	Pits	995	0.2
91	Water (<40 acres)	2,094	0.4
92	Water (>40 acres)	42,878	8.9
95	Axis mucky sandy clay loam, frequently flooded	16,431	3.4
96	Handsboro mucky silt loam, frequently flooded	19,662	4.1
97	Maurepas muck, frequently flooded	7,525	1.6
226	Bayou sandy loam, 0 to 1 percent slopes	23,394	4.8
328	Harleston fine sandy loam, 0 to 2 percent slopes	5,088	1.1
329	Harleston fine sandy loam, 2 to 5 percent slopes	4,005	0.8
330	Harleston fine sandy loam, 5 to 8 percent slopes	1,813	0.4
365	Duckston sand, 0 to 2 percent slopes	2,045	0.4
386	Newhan-Corolla complex, rolling	2,099	0.4
387	Beaches	850	0.2

* Less than 0.1 percent.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
388	Latonia loamy sand, 0 to 2 percent slopes	1,221	0.3
528	Columbus loam, 0 to 2 percent slopes, occasionally flooded	3,900	0.8
	Total	484,200	100.0

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Bahiagrass	Corn	Cotton lint	Improved bermudagrass	Soybeans
		AUM	*Bu*	*Lbs*	*AUM*	*Bu*
2------------------		---	---	---	---	---
Kinston-----------	6w					
Chastain----------	7w					
Mantachie---------	5w					
3------------------ Atmore	4w	6	40	---	---	20
4------------------ Lenoir	3w	9	100	525	9	40
5------------------ Benndale	2s	9	80	650	11	30
6------------------ Benndale	2e	8.5	75	650	10.5	30
8------------------ Latonia	2w	8.5	80	650	9.5	30
12----------------- Arat	7w	---	---	---	---	---
13----------------- Daleville	3w	8	---	---	8	25
14----------------- Daleville	6w	6	---	---	6	---
16----------------- Eustis	3s	6.5	60	---	7	---
17----------------- Eustis	6s	5.5	---	---	6	---
18----------------- Eustis	7s	---	---	---	---	---
21----------------- Bigbee	3s	7	50	---	7	---
22----------------- Myatt	4w	8	---	---	8	25
24----------------- Hyde	6w	---	---	---	---	---
25----------------- Quitman	2w	8	80	600	8	30
26----------------- Smithton	4w	7	---	---	7.5	20
27----------------- Johns	2w	8	120	650	8	40
28----------------- Vancleave	2w	8	80	600	8	30

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Corn	Cotton lint	Improved bermudagrass	Soybeans
		AUM	*Bu*	*Lbs*	*AUM*	*Bu*
29----------------- Vancleave	2e	8	75	550	8	30
30----------------- Vancleave	3e	8	75	500	8	20
32----------------- Escambia	2w	8	100	600	8	30
33----------------- Escambia	2e	8	95	600	8	30
36-----------------		8	55	400	9	20
Smithdale---------	6e					
Boykin------------	6s					
44----------------- Malbis	1	9	120	800	10	40
45----------------- Malbis	2e	9	120	750	10	35
48----------------- Suffolk	1	9	115	800	10	30
50----------------- Ruston	1	10	90	800	10	30
51----------------- Bama	1	10	90	800	10	30
52----------------- Bama	2e	10	85	750	10	30
53----------------- Bama	3e	9	80	650	9	25
55----------------- Ocilla	4w	7	60	---	7	20
56----------------- Benndale	3e	8	70	600	8	25
57----------------- Poarch	2e	9	75	650	8	30
58----------------- Benndale	4e	7.5	60	550	8	20
62----------------- Prentiss	2w	8	80	600	8	30
63----------------- Stough	2w	8	80	600	8	25
66----------------- Freest	2e	9	80	650	9	30
68----------------- Saucier	2w	9	90	650	9	30
76-----------------		---	---	---	---	---
Nugent------------	5w					
Jena--------------	5w					

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Corn	Cotton lint	Improved bermudagrass	Soybeans
		AUM	*Bu*	*Lbs*	*AUM*	*Bu*
78-----------------		6.5	---	---	7.5	20
Susquehanna-------	3e					
Freest------------	2e					
79-----------------		6.5	---	---	7.5	---
Susquehanna-------	4e					
Freest------------	3e					
80----------------- Susquehanna	6e	5.5	---	---	6.5	---
84----------------- Wadley	3s	7	60	500	7	---
85----------------- Leon	4w	---	---	---	---	---
88-----------------		---	---	---	---	---
Croatan-----------	7w					
Johnston----------	7w					
89----------------- Udorthents	4s	5	---	---	5	---
90----------------- Pits	8s	---	---	---	---	---
95----------------- Axis	7w	---	---	---	---	---
96----------------- Handsboro	8w	---	---	---	---	---
97----------------- Maurepas	8w	---	---	---	---	---
226---------------- Bayou	4w	6	40	---	---	20
328---------------- Harleston	2w	9	90	650	10	30
329---------------- Harleston	2e	8.5	85	600	10	25
330---------------- Harleston	3e	8	75	550	9	20
365---------------- Duckston	7w	---	---	---	---	---
386----------------		---	---	---	---	---
Newhan------------	8s					
Corolla-----------	7s					
387---------------- Beaches	8w	---	---	---	---	---
388---------------- Latonia	2s	8.5	80	650	9.5	30
528---------------- Columbus	2w	9	90	650	10	35

Table 6.--Prime Farmland

[Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland]

Map symbol	Map unit name	Farmland Classification
5	Benndale fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
6	Benndale fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
8	Latonia loamy sand, 0 to 2 percent slopes, occasionally flooded	All areas are prime farmland
25	Quitman silt loam, 0 to 2 percent slopes	All areas are prime farmland
27	Johns loamy fine sand, 0 to 2 percent slopes	All areas are prime farmland
28	Vancleave loamy sand, 0 to 2 percent slopes	All areas are prime farmland
29	Vancleave loamy sand, 2 to 5 percent slopes	All areas are prime farmland
32	Escambia very fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
33	Escambia very fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
44	Malbis fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
45	Malbis fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
48	Suffolk loamy sand, 0 to 2 percent slopes	All areas are prime farmland
50	Ruston fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
51	Bama fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
52	Bama fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
53	Bama fine sandy loam, 5 to 8 percent slopes	All areas are prime farmland
56	Benndale fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland
57	Poarch fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
62	Prentiss silt loam, 0 to 2 percent slopes	All areas are prime farmland
63	Stough loam, 0 to 2 percent slopes	All areas are prime farmland
66	Freest sandy loam, 2 to 5 percent slopes	All areas are prime farmland
68	Saucier fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
328	Harleston fine sandy loam, 0 to 2 percent slopes	All areas are prime farmland
329	Harleston fine sandy loam, 2 to 5 percent slopes	All areas are prime farmland
330	Harleston fine sandy loam, 5 to 8 percent slopes	All areas are prime farmland
388	Latonia loamy sand, 0 to 2 percent slopes	All areas are prime farmland
528	Columbus loam, 0 to 2 percent slopes, occasionally flooded	All areas are prime farmland

Table 7.--Forestland Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
2:				
Kinston	Cherrybark oak	95	72	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum
	Eastern cottonwood	100	129	
	Loblolly pine	100	157	
	Sweetgum	95	114	
Chastain	Baldcypress	50	43	Baldcypress, sweetgum
	Sweetgum	95	114	
	Water oak	85	86	
	Water tupelo	50	72	
Mantachie	Cherrybark oak	100	143	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum
	Eastern cottonwood	90	100	
	Green ash	80	57	
	Loblolly pine	98	143	
	Sweetgum	95	114	
3:				
Atmore	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	72	86	
	Slash pine	80	114	
4:				
Lenoir	Loblolly pine	87	129	Loblolly pine, sweetgum
	Slash pine	87	129	
	Sweetgum	90	100	
	Water oak	85	86	
5:				
Benndale	Loblolly pine	94	143	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	79	100	
	Slash pine	94	172	
6:				
Benndale	Loblolly pine	94	143	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	79	100	
	Slash pine	94	172	
8:				
Latonia	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	90	157	
12:				
Arat	Baldcypress	50	43	Baldcypress
	Water tupelo	50	72	
13:				
Daleville	Loblolly pine	95	143	Green ash, loblolly pine, Nuttall oak, Shumard's oak, sweetgum
	Sweetgum	90	100	
	Water oak	85	86	
	Willow oak	80	72	
14:				
Daleville	Loblolly pine	95	143	Green ash, loblolly pine, Nuttall oak, Shumard's oak, sweetgum
	Sweetgum	90	100	
	Water oak	85	86	
	Willow oak	80	72	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
16:				
Eustis	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	65	72	
	Slash pine	80	143	
17:				
Eustis	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	65	72	
	Slash pine	80	143	
18:				
Eustis	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	65	72	
	Slash pine	80	143	
21:				
Bigbee	Loblolly pine	88	129	Loblolly pine, longleaf pine
	Longleaf pine	65	72	
22:				
Myatt	Loblolly pine	88	129	Loblolly pine, slash pine, sweetgum
	Slash pine	92	172	
	Sweetgum	92	114	
	Water oak	86	86	
24:				
Hyde	Green ash	90	100	Atlantic white cedar, green ash, loblolly pine, sweetgum
	Loblolly pine	107	172	
	Sweetgum	90	100	
	Water oak	85	86	
	Willow oak	80	72	
25:				
Quitman	Loblolly pine	92	143	American sycamore, loblolly pine, slash pine, sweetgum
	Slash pine	90	157	
	Sweetgum	93	114	
26:				
Smithton	Cherrybark oak	85	100	Cherrybark oak, loblolly pine, sweetgum
	Loblolly pine	86	129	
	Slash pine	86	129	
	Sweetgum	86	100	
	Water oak	85	86	
27:				
Johns	Loblolly pine	88	129	Loblolly pine, slash pine
	Longleaf pine	61	57	
	Slash pine	88	129	
	Sweetgum	90	100	
28:				
Vancleave	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	85	86	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
29:				
Vancleave	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	85	86	
30:				
Vancleave	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	70	86	
	Slash pine	90	157	
	Sweetgum	90	100	
	Water oak	85	86	
32:				
Escambia	Loblolly pine	90	129	Loblolly pine, slash pine
	Longleaf pine	80	100	
	Slash pine	90	157	
	Sweetgum	90	100	
33:				
Escambia	Loblolly pine	90	129	Loblolly pine, slash pine
	Longleaf pine	80	100	
	Slash pine	90	157	
	Sweetgum	90	100	
36:				
Smithdale	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	69	72	
	Slash pine	85	157	
Boykin	Loblolly pine	86	129	Loblolly pine, longleaf pine
	Longleaf pine	80	100	
	Shortleaf pine	80	129	
	Slash pine	86	129	
44:				
Malbis	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	100	
	Slash pine	90	157	
45:				
Malbis	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	80	100	
	Slash pine	90	157	
48:				
Suffolk	Loblolly pine	82	114	Loblolly pine, longleaf pine
	Longleaf pine	72	114	
	Southern red oak	70	57	
50:				
Ruston	Loblolly pine	91	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	76	86	
	Slash pine	91	172	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
51:				
Bama	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	75	86	longleaf pine,
	Slash pine	90	157	slash pine
52:				
Bama	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	75	86	longleaf pine,
	Slash pine	90	157	slash pine
53:				
Bama	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	75	86	longleaf pine,
	Slash pine	90	157	slash pine
55:				
Ocilla	Loblolly pine	85	114	Loblolly pine,
	Longleaf pine	77	100	longleaf pine,
	Slash pine	90	157	slash pine
56:				
Benndale	Loblolly pine	94	143	Loblolly pine,
	Longleaf pine	79	100	longleaf pine,
	Slash pine	94	172	slash pine
57:				
Poarch	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	73	86	longleaf pine,
	Slash pine	90	157	slash pine
58:				
Benndale	Loblolly pine	94	143	Loblolly pine,
	Longleaf pine	79	100	longleaf pine,
	Slash pine	94	172	slash pine
62:				
Prentiss	Cherrybark oak	90	114	Loblolly pine,
	Loblolly pine	88	129	slash pine
	Longleaf pine	72	114	
	Sweetgum	90	100	
	White oak	80	57	
63:				
Stough	Cherrybark oak	85	100	Loblolly pine,
	Loblolly pine	90	129	slash pine,
	Slash pine	86	157	sweetgum
	Sweetgum	85	86	
	Water oak	80	72	
66:				
Freest	Loblolly pine	90	129	Loblolly pine,
	Shortleaf pine	80	129	slash pine
	Slash pine	85	157	
68:				
Saucier	Loblolly pine	80	114	Loblolly pine,
	Longleaf pine	60	57	slash pine
	Slash pine	80	143	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
76:				
Nugent	Loblolly pine	90	129	American sycamore, eastern cottonwood, loblolly pine, slash pine, sweetgum, yellow poplar
	Slash pine	90	157	
	Sweetgum	95	114	
	Water oak	85	86	
	Willow oak	85	86	
Jena	Loblolly pine	100	157	American sycamore, eastern cottonwood, green ash, loblolly pine, slash pine
	Slash pine	100	157	
	Sweetgum	90	100	
	Water oak	80	72	
78:				
Susquehanna	Loblolly pine	78	114	Loblolly pine, shortleaf pine
	Shortleaf pine	68	100	
Freest	Loblolly pine	90	129	Loblolly pine, slash pine
	Shortleaf pine	80	129	
	Slash pine	85	157	
79:				
Susquehanna	Loblolly pine	78	114	Loblolly pine, shortleaf pine
	Shortleaf pine	68	100	
Freest	Loblolly pine	90	129	Loblolly pine, slash pine
	Shortleaf pine	80	129	
	Slash pine	85	157	
80:				
Susquehanna	Loblolly pine	78	114	Loblolly pine, shortleaf pine
	Shortleaf pine	68	100	
84:				
Wadley	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	79	100	
	Slash pine	85	157	
85:				
Leon	Loblolly pine	65	86	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	60	57	
	Pondcypress	75	29	
	Slash pine	65	114	
88:				
Croatan	Loblolly pine	70	86	Loblolly pine, pond pine
	Pond pine	55	29	
	Sweetgum	70	57	
Johnston	Baldcypress	50	43	Baldcypress, green ash, loblolly pine, sweetgum
	Loblolly pine	106	172	
	Sweetgum	94	114	
	Water oak	103	100	
89:				
Udorthents	Loblolly pine	68	86	Loblolly pine, slash pine
	Slash pine	68	86	

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
90:				
Pits.				
95:				
Axis.				
96:				
Handsboro.				
97:				
Maurepas.				
226:				
Bayou	Loblolly pine	65	86	Loblolly pine,
	Longleaf pine	47	29	slash pine
	Slash pine	65	114	
328:				
Harleston	Loblolly pine	90	129	Loblolly pine,
	Shortleaf pine	80	129	longleaf pine,
	Slash pine	90	129	slash pine
	Sweetgum	75	72	
329:				
Harleston	Loblolly pine	90	129	Loblolly pine,
	Shortleaf pine	80	129	longleaf pine,
	Slash pine	90	129	slash pine
	Sweetgum	75	72	
330:				
Harleston	Loblolly pine	90	129	Loblolly pine,
	Shortleaf pine	80	129	longleaf pine,
	Slash pine	90	129	slash pine
	Sweetgum	75	72	
365:				
Duckston.				
386:				
Newhan.				
Corolla.				
387:				
Beaches.				
388:				
Latonia	Loblolly pine	90	129	Loblolly pine,
	Longleaf pine	70	86	longleaf pine,
	Slash pine	90	157	slash pine
528:				
Columbus	Loblolly pine	90	129	Loblolly pine,
	Sweetgum	85	86	slash pine,
	Water oak	90	86	sweetgum, yellow
	Yellow poplar	90	86	poplar

Table 8.--Forestland Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
2:							
Kinston	40	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	1.00		
Chastain	30	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	1.00		
				Low strength	0.50		
Mantachie	20	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
				Wetness	0.50		
3:							
Atmore	90	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
4:							
Lenoir	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
5:							
Benndale	85	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
6:							
Benndale	85	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
8:							
Latonia	90	Moderate		Moderately suited		Slight	
		Flooding	0.50	Flooding	0.50		
12:							
Arat	95	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Wetness	1.00	Flooding	1.00	Wetness	0.50
		Low strength	0.50	Wetness	1.00		
13:							
Daleville	90	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
14:							
Daleville	90	Moderate		Poorly suited		Severe	
		Low strength	0.50	Ponding	1.00	Low strength	1.00
				Wetness	1.00		
				Low strength	0.50		

Table 8.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
16:							
Eustis	90	Moderate		Moderately suited		Slight	
		Sandiness	0.50	Sandiness	0.50		
17:							
Eustis	85	Moderate		Moderately suited		Slight	
		Sandiness	0.50	Sandiness	0.50		
				Slope	0.50		
18:							
Eustis	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00		
		Sandiness	0.50	Sandiness	0.50		
21:							
Bigbee	90	Moderate		Moderately suited		Slight	
		Flooding	0.50	Flooding	0.50		
22:							
Myatt	90	Moderate		Poorly suited		Severe	
		Flooding	0.50	Wetness	1.00	Low strength	1.00
		Low strength	0.50	Flooding	0.50		
				Low strength	0.50		
24:							
Hyde	90	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
25:							
Quitman	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
26:							
Smithton	90	Moderate		Poorly suited		Severe	
		Flooding	0.50	Wetness	1.00	Low strength	1.00
		Low strength	0.50	Flooding	0.50		
				Low strength	0.50		
27:							
Johns	90	Slight		Well suited		Slight	
28:							
Vancleave	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
29:							
Vancleave	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
30:							
Vancleave	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
				Slope	0.50		

Table 8.--Forestland Management--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
32:							
Escambia	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
33:							
Escambia	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
36:							
Smithdale	55	Slight		Moderately suited		Slight	
				Slope	0.50		
Boykin	30	Slight		Moderately suited		Slight	
				Slope	0.50		
44:							
Malbis	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
45:							
Malbis	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
48:							
Suffolk	90	Moderate		Well suited		Moderate	
		Low strength	0.50			Low strength	0.50
50:							
Ruston	90	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
51:							
Bama	90	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
52:							
Bama	90	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
53:							
Bama	90	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
				Slope	0.50		
55:							
Ocilla	85	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
				Wetness	0.50		
56:							
Benndale	85	Moderate		Moderately suited		Slight	
		Low strength	0.50	Low strength	0.50		
				Slope	0.50		
57:							
Poarch	85	Slight		Well suited		Slight	

Table 8.--Forestland Management--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
58:							
Benndale	85	Moderate		Moderately suited		Slight	
		Low strength	0.50	Slope	0.50		
				Low strength	0.50		
62:							
Prentiss	90	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
63:							
Stough	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Wetness	0.50		
66:							
Freest	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
68:							
Saucier	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
76:							
Nugent	50	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
Jena	40	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
		Low strength	0.50	Low strength	0.50		
78:							
Susquehanna	50	Moderate		Moderately suited		Severe	
		Landslides	0.50	Low strength	0.50	Low strength	1.00
		Low strength	0.50	Landslides	0.50		
Freest	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
79:							
Susquehanna	50	Moderate		Moderately suited		Severe	
		Landslides	0.50	Low strength	0.50	Low strength	1.00
		Low strength	0.50	Landslides	0.50		
				Slope	0.50		
Freest	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
80:							
Susquehanna	90	Severe		Poorly suited		Severe	
		Landslides	1.00	Landslides	1.00	Low strength	1.00
		Low strength	0.50	Slope	0.50		
				Low strength	0.50		
84:							
Wadley	90	Slight		Well suited		Slight	

Table 8.--Forestland Management--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
85:							
Leon	85	Moderate		Poorly suited		Severe	
		Sandiness	0.50	Wetness	1.00	Low strength	1.00
				Sandiness	0.50	Wetness	0.50
88:							
Croatan	50	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	1.00	Low strength	1.00		
				Wetness	1.00		
Johnston	40	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Wetness	1.00		
				Low strength	0.50		
89:							
Udorthents	95	Not rated		Not rated		Not rated	
90:							
Pits	95	Not rated		Not rated		Not rated	
95:							
Axis	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Wetness	1.00	Wetness	0.50
		Low strength	0.50	Low strength	0.50		
96:							
Handsboro	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Low strength	1.00	Flooding	1.00	Wetness	0.50
		Wetness	1.00	Wetness	1.00		
97:							
Maurepas	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Low strength	1.00	Flooding	1.00	Wetness	0.50
		Wetness	1.00	Low strength	1.00		
226:							
Bayou	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
328:							
Harleston	90	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
329:							
Harleston	90	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
330:							
Harleston	85	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Low strength	0.50	Low strength	0.50
				Slope	0.50		

Table 8.--Forestland Management--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
365:							
Duckston------------	95	Severe		Poorly suited		Severe	
		Wetness	1.00	Wetness	1.00	Low strength	1.00
		Sandiness	0.50	Sandiness	0.50	Wetness	0.50
386:							
Newhan--------------	55	Moderate		Moderately suited		Severe	
		Sandiness	0.50	Slope	0.50	Low strength	1.00
				Sandiness	0.50		
Corolla-------------	40	Moderate		Moderately suited		Severe	
		Sandiness	0.50	Sandiness	0.50	Low strength	1.00
387:							
Beaches-------------	95	Severe		Poorly suited		Severe	
		Wetness	1.00	Wetness	1.00	Low strength	1.00
		Sandiness	0.50	Sandiness	0.50	Wetness	0.50
388:							
Latonia-------------	90	Slight		Well suited		Slight	
528:							
Columbus------------	90	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 9a.--Recreation (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
2:							
Kinston	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Chastain	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Slow water movement	0.96	Flooding	1.00
		Slow water movement	0.96	Flooding	0.40	Slow water movement	0.96
Mantachie	20	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
3:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
4:							
Lenoir	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
5:							
Benndale	85	Not limited		Not limited		Not limited	
6:							
Benndale	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
8:							
Latonia	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.79	Too sandy	0.79
		Too sandy	0.79			Flooding	0.60
12:							
Arat	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
14:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
16:							
Eustis--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
						Slope	0.50
17:							
Eustis--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.87	Too sandy	0.87	Slope	1.00
		Slope	0.04	Slope	0.04	Too sandy	0.87
18:							
Eustis--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
21:							
Bigbee--------------	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.81	Too sandy	0.81
		Too sandy	0.81			Flooding	0.60
						Slope	0.12
22:							
Myatt---------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00			Flooding	0.60
24:							
Hyde----------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
25:							
Quitman-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.77	Depth to saturated zone	0.43	Depth to saturated zone	0.77
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
26:							
Smithton------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Slow water movement	0.21	Flooding	0.60
		Slow water movement	0.21			Slow water movement	0.21
27:							
Johns---------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.89	Too sandy	0.89	Too sandy	0.89
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07
28:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Too sandy	0.50	Too sandy	0.50	Too sandy	0.50
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07
29:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Too sandy	0.50	Too sandy	0.50	Slope	0.50
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Too sandy	0.50
30:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Too sandy	0.50	Too sandy	0.50	Slow water movement	0.96
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Too sandy	0.50
32:							
Escambia------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
33:							
Escambia------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
						Depth to saturated zone	0.39
36:							
Smithdale-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Boykin--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.37	Slope	0.37	Too sandy	0.84
44:							
Malbis--------------	85	Not limited		Not limited		Not limited	

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
45:							
Malbis	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
48:							
Suffolk	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
50:							
Ruston	90	Not limited		Not limited		Not limited	
51:							
Bama	90	Not limited		Not limited		Not limited	
52:							
Bama	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
53:							
Bama	90	Not limited		Not limited		Very limited	
						Slope	1.00
55:							
Ocilla	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.81	Too sandy	0.81
		Too sandy	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Depth to saturated zone	0.81			Flooding	0.60
56:							
Benndale	85	Not limited		Not limited		Very limited	
						Slope	1.00
57:							
Poarch	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
58:							
Benndale	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
62:							
Prentiss	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07
63:							
Stough	90	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
66:							
Freest	85	Somewhat limited		Somewhat limited		Somewhat limited	
		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	Slope	0.50
						Depth to saturated zone	0.39

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
68:							
Saucier	90	Somewhat limited Slow water movement	 0.96	Somewhat limited Slow water movement	 0.96	Somewhat limited Slow water movement	 0.96
76:							
Nugent	50	Very limited Flooding Too sandy	 1.00 0.42	Somewhat limited Too sandy Flooding	 0.42 0.40	Very limited Flooding Too sandy	 1.00 0.42
Jena	40	Very limited Flooding	 1.00	Somewhat limited Flooding	 0.40	Very limited Flooding	 1.00
78:							
Susquehanna	50	Very limited Slow water movement	 1.00	Very limited Slow water movement	 1.00	Very limited Slow water movement Slope	 1.00 0.12
Freest	35	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.39	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.19	Somewhat limited Slow water movement Depth to saturated zone Slope	 0.96 0.39 0.12
79:							
Susquehanna	50	Very limited Slow water movement	 1.00	Very limited Slow water movement	 1.00	Very limited Slow water movement Slope	 1.00 1.00
Freest	35	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.39	Somewhat limited Slow water movement Depth to saturated zone	 0.96 0.19	Very limited Slope Slow water movement Depth to saturated zone	 1.00 0.96 0.39
80:							
Susquehanna	90	Very limited Slow water movement Slope	 1.00 0.16	Very limited Slow water movement Slope	 1.00 0.16	Very limited Slope Slow water movement	 1.00 1.00
84:							
Wadley	90	Somewhat limited Too sandy	 0.81	Somewhat limited Too sandy	 0.81	Somewhat limited Too sandy Slope	 0.81 0.12
85:							
Leon	85	Very limited Depth to saturated zone Too sandy	 1.00 1.00	Very limited Too sandy Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Too sandy	 1.00 1.00
88:							
Croatan	50	Very limited Depth to saturated zone Flooding	 1.00 1.00	Very limited Depth to saturated zone Flooding	 1.00 0.40	Very limited Depth to saturated zone Flooding	 1.00 1.00

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
88:							
Johnston------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
89:							
Udorthents----------	95	Not rated		Not rated		Not rated	
90:							
Pits----------------	95	Not rated		Not rated		Not rated	
95:							
Axis----------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Salinity	0.50	Flooding	1.00
		Salinity	0.50	Flooding	0.40	Salinity	0.50
96:							
Handsboro-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Salinity	1.00	Depth to saturated zone	1.00	Salinity	1.00
		Flooding	1.00	Salinity	1.00	Flooding	1.00
97:							
Maurepas------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Salinity	1.00	Depth to saturated zone	1.00	Salinity	1.00
		Flooding	1.00	Salinity	1.00	Flooding	1.00
226:							
Bayou---------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
328:							
Harleston-----------	90	Not limited		Not limited		Not limited	
329:							
Harleston-----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.50
330:							
Harleston-----------	85	Not limited		Not limited		Very limited	
						Slope	1.00
365:							
Duckston------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
		Salinity	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Flooding	1.00	Salinity	1.00	Salinity	1.00
386:							
Newhan--------------	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00	Too sandy	1.00
		Too sandy	1.00	Salinity	1.00	Salinity	1.00
		Salinity	1.00	Sodium content	1.00	Sodium content	1.00

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
386:							
Corolla-------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00	Too sandy	1.00
		Too sandy	1.00	Salinity	1.00	Salinity	1.00
		Salinity	1.00	Sodium content	1.00	Sodium content	1.00
387:							
Beaches-------------	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Too sandy	1.00	Too sandy	1.00
		Too sandy	1.00	Salinity	1.00	Salinity	1.00
		Salinity	1.00	Sodium content	1.00	Sodium content	1.00
388:							
Latonia-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
528:							
Columbus------------	90	Very limited		Not limited		Somewhat limited	
		Flooding	1.00			Flooding	0.60

Table 9b.--Recreation (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Paths and trails		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:							
Kinston-------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Chastain------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Mantachie-----------	20	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
3:							
Atmore--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
4:							
Lenoir--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
5:							
Benndale------------	85	Not limited		Not limited		Not limited	
6:							
Benndale------------	85	Not limited		Not limited		Not limited	
8:							
Latonia-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Flooding	0.60
12:							
Arat----------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
13:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
14:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16:							
Eustis	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Droughty	0.43
17:							
Eustis	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Droughty	0.43
						Slope	0.04
18:							
Eustis	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.87	Too sandy	0.87	Slope	1.00
						Droughty	0.43
21:							
Bigbee	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Droughty	0.65
						Flooding	0.60
22:							
Myatt	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
24:							
Hyde	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
25:							
Quitman	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.08	Depth to saturated zone	0.08	Depth to saturated zone	0.43
26:							
Smithton	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
27:							
Johns	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.89	Too sandy	0.89	Depth to saturated zone	0.03
28:							
Vancleave	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50	Depth to saturated zone	0.03
29:							
Vancleave	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50	Depth to saturated zone	0.03
30:							
Vancleave	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50	Depth to saturated zone	0.03

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
32:							
Escambia	90	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.19			Depth to saturated zone	0.19
33:							
Escambia	90	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.19			Depth to saturated zone	0.19
36:							
Smithdale	55	Not limited		Not limited		Somewhat limited	
						Slope	0.37
Boykin	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.69
						Slope	0.37
44:							
Malbis	85	Not limited		Not limited		Not limited	
45:							
Malbis	85	Not limited		Not limited		Not limited	
48:							
Suffolk	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.81	Too sandy	0.81		
50:							
Ruston	90	Not limited		Not limited		Not limited	
51:							
Bama	90	Not limited		Not limited		Not limited	
52:							
Bama	90	Not limited		Not limited		Not limited	
53:							
Bama	90	Not limited		Not limited		Not limited	
55:							
Ocilla	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Flooding	0.60
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Droughty	0.25
56:							
Benndale	85	Not limited		Not limited		Not limited	
57:							
Poarch	85	Not limited		Not limited		Not limited	
58:							
Benndale	85	Not limited		Not limited		Somewhat limited	
						Slope	0.16
62:							
Prentiss	90	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.03

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
63:							
Stough	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Depth to saturated zone	0.94
						Droughty	0.01
66:							
Freest	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
68:							
Saucier	90	Not limited		Not limited		Not limited	
76:							
Nugent	50	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.42	Too sandy	0.42	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Droughty	0.01
Jena	40	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
78:							
Susquehanna	50	Not limited		Not limited		Not limited	
Freest	35	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
79:							
Susquehanna	50	Not limited		Not limited		Not limited	
Freest	35	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
80:							
Susquehanna	90	Not limited		Not limited		Somewhat limited	
						Slope	0.16
84:							
Wadley	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Droughty	0.01
85:							
Leon	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Too sandy	1.00	Too sandy	0.50
						Droughty	0.16
88:							
Croatan	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
88:							
Johnston------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
89:							
Udorthents----------	95	Not rated		Not rated		Not rated	
90:							
Pits----------------	95	Not rated		Not rated		Not rated	
95:							
Axis----------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
						Sulfur content	1.00
96:							
Handsboro-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Salinity	1.00
97:							
Maurepas------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Salinity	1.00
226:							
Bayou---------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
328:							
Harleston-----------	90	Not limited		Not limited		Not limited	
329:							
Harleston-----------	90	Not limited		Not limited		Not limited	
330:							
Harleston-----------	85	Not limited		Not limited		Not limited	
365:							
Duckston------------	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Salinity	1.00
		Too sandy	1.00	Too sandy	1.00	Depth to saturated zone	1.00
						Droughty	1.00
386:							
Newhan--------------	55	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Droughty	1.00
						Salinity	1.00
						Sodium content	1.00

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
386:							
Corolla	40	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Droughty	1.00
						Salinity	1.00
						Sodium content	1.00
387:							
Beaches	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Salinity	1.00
		Too sandy	1.00	Too sandy	1.00	Depth to saturated zone	1.00
						Droughty	1.00
388:							
Latonia	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.79	Too sandy	0.79		
528:							
Columbus	90	Not limited		Not limited		Somewhat limited	
						Flooding	0.60

Table 10.--Wildlife Habitat

[See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
2:										
Kinston	Very poor	Poor	Poor	Poor	Poor	Good	Fair	Poor	Fair	Good
Chastain	Very poor	Poor	Poor	Fair	Poor	Good	Good	Poor	Fair	Good
Mantachie	Poor	Fair	Fair	Good	Fair	Fair	Fair	Fair	Good	Good
3:										
Atmore	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
4:										
Lenoir	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good
5:										
Benndale	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
6:										
Benndale	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
8:										
Latonia	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
12:										
Arat	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Fair	Very poor	Very poor	Good
13:										
Daleville	Poor	Fair	Fair	Good	Fair	Good	Good	Fair	Good	Good
14:										
Daleville	Poor	Fair	Fair	Good	Poor	Good	Good	Fair	Good	Good
16:										
Eustis	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
17:										
Eustis	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
18:										
Eustis	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
21:										
Bigbee	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
22:										
Myatt	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Good	Good

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
24: Hyde	Very poor	Poor	Poor	Fair	Poor	Good	Fair	Poor	Fair	Fair
25: Quitman	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
26: Smithton	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Good	Fair
27: Johns	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
28: Vancleave	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
29: Vancleave	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor
30: Vancleave	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
32: Escambia	Fair	Good	Good	Good	Good	Fair	Good	Good	Good	Fair
33: Escambia	Fair	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
36: Smithdale	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Boykin	Poor	Fair	Good	Fair	Good	Very poor	Very poor	Good	Good	Very poor
44: Malbis	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor
45: Malbis	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Very poor
48: Suffolk	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
50: Ruston	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
51: Bama	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
52: Bama	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
53: Bama	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
55: Ocilla	Poor	Fair	Fair	Fair	Good	Fair	Fair	Fair	Good	Fair
56: Benndale	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
57: Poarch	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
58: Benndale	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
62: Prentiss	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
63: Stough	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
66: Freest	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
68: Saucier	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
76: Nugent	Poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Poor	Fair	Very poor
Jena	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
78: Susquehanna	Fair	Good	Good	Good	Good	Very poor	Poor	Good	Good	Very poor
Freest	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
79: Susquehanna	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Freest	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
80: Susquehanna	Fair	Good	Good	Good	Good	Very poor	Poor	Good	Good	Very poor
84: Wadley	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
85:										
Leon	Poor	Fair	Fair	Fair	Fair	Poor	Fair	Fair	Fair	Poor
88:										
Croatan	Very poor	Poor	Poor	Poor	Very poor	Good	Good	Poor	Poor	Good
Johnston	Very poor	Poor	Poor	Poor	Very poor	Good	Good	Poor	Poor	Good
89:										
Udorthents	Fair	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Poor	Very poor
90:										
Pits.										
95:										
Axis	Very poor	Poor	Poor	Very poor	Very poor	Good	Good	Poor	Very poor	Good
96:										
Handsboro	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Fair
97:										
Maurepas	Very poor	Very poor	Very poor	Very poor	Very poor	Fair	Very poor	Very poor	Very poor	Fair
226:										
Bayou	Poor	Fair	Fair	Poor	Poor	Good	Fair	Fair	Fair	Fair
328:										
Harleston	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
329:										
Harleston	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
330:										
Harleston	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
365:										
Duckston	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Poor	Very poor	Very poor	Poor
386:										
Newhan	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor
Corolla	Very poor	Very poor	Very poor	Very poor	Very poor	Poor	Very poor	Very poor	Very poor	Very poor
387:										
Beaches	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
388:										
Latonia	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
528:										
Columbus------	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor

Table 11a.--Building Site Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2:							
Kinston	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Chastain	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Mantachie	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
4:							
Lenoir	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
5:							
Benndale	85	Not limited		Not limited		Not limited	
6:							
Benndale	85	Not limited		Not limited		Not limited	
8:							
Latonia	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
12:							
Arat	95	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
13:							
Daleville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
14:							
Daleville	90	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
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
16:							
Eustis	90	Not limited		Not limited		Not limited	
17:							
Eustis	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.04	Slope	0.04	Slope	1.00
18:							
Eustis	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21:							
Bigbee	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.24		
22:							
Myatt	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
24:							
Hyde	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
25:							
Quitman	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.77	Depth to saturated zone	1.00	Depth to saturated zone	0.77
26:							
Smithton	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
27:							
Johns	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
28:							
Vancleave	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
29:							
Vancleave	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30:							
Vancleave-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Slope	0.88
						Depth to saturated zone	0.07
32:							
Escambia------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
33:							
Escambia------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
36:							
Smithdale-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
Boykin--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
44:							
Malbis--------------	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
45:							
Malbis--------------	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
48:							
Suffolk-------------	90	Not limited		Not limited		Not limited	
50:							
Ruston--------------	90	Not limited		Not limited		Not limited	
51:							
Bama----------------	90	Not limited		Not limited		Not limited	
52:							
Bama----------------	90	Not limited		Not limited		Not limited	
53:							
Bama----------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
55:							
Ocilla--------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
56:							
Benndale------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
57:							
Poarch	85	Not limited		Somewhat limited Depth to saturated zone	 0.73	Not limited	
58:							
Benndale	85	Somewhat limited Slope	 0.16	Somewhat limited Slope	 0.16	Very limited Slope	 1.00
62:							
Prentiss	90	Somewhat limited Depth to saturated zone	 0.07	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.07
63:							
Stough	90	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
66:							
Freest	85	Very limited Shrink-swell Depth to saturated zone	 1.00 0.39	Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	Very limited Shrink-swell Depth to saturated zone	 1.00 0.39
68:							
Saucier	90	Not limited		Somewhat limited Depth to saturated zone Shrink-swell	 0.90 0.50	Not limited	
76:							
Nugent	50	Very limited Flooding	 1.00	Very limited Flooding Depth to saturated zone	 1.00 0.24	Very limited Flooding	 1.00
Jena	40	Very limited Flooding	 1.00	Very limited Flooding	 1.00	Very limited Flooding	 1.00
78:							
Susquehanna	50	Very limited Shrink-swell	 1.00	Very limited Shrink-swell	 1.00	Very limited Shrink-swell	 1.00
Freest	35	Very limited Shrink-swell Depth to saturated zone	 1.00 0.39	Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	Very limited Shrink-swell Depth to saturated zone	 1.00 0.39
79:							
Susquehanna	50	Very limited Shrink-swell	 1.00	Very limited Shrink-swell	 1.00	Very limited Shrink-swell Slope	 1.00 0.88
Freest	35	Very limited Shrink-swell Depth to saturated zone	 1.00 0.39	Very limited Depth to saturated zone Shrink-swell	 1.00 1.00	Very limited Shrink-swell Slope Depth to saturated zone	 1.00 0.88 0.39

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
80:							
Susquehanna---------	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	0.16	Slope	0.16	Shrink-swell	1.00
84:							
Wadley--------------	90	Not limited		Not limited		Not limited	
85:							
Leon----------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
88:							
Croatan-------------	50	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	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
Johnston------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
89:							
Udorthents----------	95	Not rated		Not rated		Not rated	
90:							
Pits----------------	95	Not rated		Not rated		Not rated	
95:							
Axis----------------	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
96:							
Handsboro-----------	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
97:							
Maurepas------------	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
226:							
Bayou---------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
328:							
Harleston-----------	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		

Table 11a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
329:							
Harleston-----------	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
330:							
Harleston-----------	85	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	0.99	Slope	0.88
365:							
Duckston------------	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
386:							
Newhan--------------	55	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Slope	0.16	Slope	0.16	Slope	1.00
Corolla-------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
387:							
Beaches-------------	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
388:							
Latonia-------------	90	Not limited		Not limited		Not limited	
528:							
Columbus------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.99		

Table 11b.--Building Site Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2:							
Kinston-------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Low strength	1.00	Cutbanks cave	0.10		
Chastain------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Flooding	0.80		
Mantachie-----------	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.94	Flooding	0.80	Depth to saturated zone	0.94
				Cutbanks cave	0.10		
3:							
Atmore--------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
4:							
Lenoir--------------	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Too clayey	0.28		
		Depth to saturated zone	0.48	Cutbanks cave	0.10		
5:							
Benndale------------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
6:							
Benndale------------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
8:							
Latonia-------------	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
				Flooding	0.60		
12:							
Arat----------------	95	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
13:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
14:							
Daleville-----------	90	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
		Low strength	1.00	Cutbanks cave	0.10		
16:							
Eustis--------------	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.43
17:							
Eustis--------------	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.04	Cutbanks cave	1.00	Droughty	0.43
				Slope	0.04	Slope	0.04
18:							
Eustis--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.43
21:							
Bigbee--------------	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Droughty	0.65
				Flooding	0.60	Flooding	0.60
				Depth to saturated zone	0.24		
22:							
Myatt---------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
				Cutbanks cave	0.10		
24:							
Hyde----------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Cutbanks cave	0.10		
25:							
Quitman-------------	90	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.43
		Depth to saturated zone	0.43	Cutbanks cave	0.10		
26:							
Smithton------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.60	Flooding	0.60
				Cutbanks cave	0.10		

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
27:							
Johns---------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
				Cutbanks cave	1.00		
28:							
Vancleave-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
				Cutbanks cave	0.10		
29:							
Vancleave-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
				Cutbanks cave	0.10		
30:							
Vancleave-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
				Cutbanks cave	0.10		
32:							
Escambia------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
33:							
Escambia------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.19	Depth to saturated zone	1.00	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
36:							
Smithdale-----------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
				Cutbanks cave	0.10		
Boykin--------------	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.37	Cutbanks cave	1.00	Droughty	0.69
				Slope	0.37	Slope	0.37
44:							
Malbis--------------	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
45:							
Malbis--------------	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
48:							
Suffolk-------------	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
50:							
Ruston--------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
51:							
Bama----------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
52:							
Bama----------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
53:							
Bama----------------	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
55:							
Ocilla--------------	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Depth to saturated zone	0.48	Cutbanks cave	1.00	Depth to saturated zone	0.48
				Flooding	0.60	Droughty	0.25
56:							
Benndale------------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
57:							
Poarch--------------	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.73		
				Cutbanks cave	0.10		
58:							
Benndale------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
				Cutbanks cave	0.10		
62:							
Prentiss------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.03	Depth to saturated zone	1.00	Depth to saturated zone	0.03
				Cutbanks cave	0.10		
63:							
Stough--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.94	Depth to saturated zone	1.00	Depth to saturated zone	0.94
				Cutbanks cave	0.10	Droughty	0.01
66:							
Freest--------------	85	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
68:							
Saucier	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.90		
				Cutbanks cave	0.10		
76:							
Nugent	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80	Droughty	0.01
				Depth to saturated zone	0.24		
Jena	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80		
78:							
Susquehanna	50	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
Freest	35	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
79:							
Susquehanna	50	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.28		
		Shrink-swell	1.00	Cutbanks cave	0.10		
Freest	35	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
80:							
Susquehanna	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Too clayey	0.28	Slope	0.16
		Shrink-swell	1.00	Slope	0.16		
		Slope	0.16	Cutbanks cave	0.10		
84:							
Wadley	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.01
85:							
Leon	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	1.00	Too sandy	0.50
						Droughty	0.16

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets Rating class and limiting features	Value	Shallow excavations Rating class and limiting features	Value	Lawns and landscaping Rating class and limiting features	Value
88:							
Croatan	50	Very limited Depth to saturated zone Subsidence Flooding	 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 1.00
Johnston	40	Very limited Depth to saturated zone Flooding	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00
89:							
Udorthents	95	Not rated		Not rated		Not rated	
90:							
Pits	95	Not rated		Not rated		Not rated	
95:							
Axis	85	Very limited Depth to saturated zone Flooding	 1.00 1.00	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone Sulfur content	 1.00 1.00 1.00
96:							
Handsboro	85	Very limited Ponding Depth to saturated zone Subsidence	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Organic matter content	 1.00 1.00 1.00	Very limited Ponding Flooding Salinity	 1.00 1.00 1.00
97:							
Maurepas	85	Very limited Ponding Depth to saturated zone Subsidence	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Organic matter content	 1.00 1.00 1.00	Very limited Ponding Flooding Salinity	 1.00 1.00 1.00
226:							
Bayou	85	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
328:							
Harleston	90	Not limited		Very limited Depth to saturated zone Cutbanks cave	 0.99 0.10	Not limited	
329:							
Harleston	90	Not limited		Very limited Depth to saturated zone Cutbanks cave	 0.99 0.10	Not limited	

Table 11b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
330:							
Harleston	85	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
				Cutbanks cave	0.10		
365:							
Duckston	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Salinity	1.00
		Flooding	0.40	Cutbanks cave	1.00	Depth to saturated zone	1.00
						Droughty	1.00
386:							
Newhan	55	Somewhat limited		Very limited		Very limited	
		Flooding	0.40	Cutbanks cave	1.00	Droughty	1.00
		Slope	0.16	Slope	0.16	Salinity	1.00
						Sodium content	1.00
Corolla	40	Somewhat limited		Very limited		Very limited	
		Flooding	0.40	Depth to saturated zone	1.00	Droughty	1.00
		Depth to saturated zone	0.03	Cutbanks cave	1.00	Salinity	1.00
						Sodium content	1.00
387:							
Beaches	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Droughty	1.00
		Depth to saturated zone	0.03	Cutbanks cave	1.00	Salinity	1.00
				Flooding	1.00	Sodium content	1.00
388:							
Latonia	90	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
528:							
Columbus	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.99	Flooding	0.60
				Flooding	0.60		
				Cutbanks cave	0.10		

Table 12a.--Sanitary Facilities (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
2:					
Kinston	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
Chastain	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
Mantachie	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
3:					
Atmore	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
4:					
Lenoir	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
5:					
Benndale	85	Not limited		Very limited	
				Seepage	0.99
6:					
Benndale	85	Not limited		Very limited	
				Seepage	0.99
				Slope	0.32
8:					
Latonia	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage	1.00	Seepage	1.00

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
12:					
Arat	95	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
13:					
Daleville	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
14:					
Daleville	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
16:					
Eustis	90	Very limited		Very limited	
		Seepage	1.00	Seepage	1.00
				Slope	0.32
17:					
Eustis	85	Very limited		Very limited	
		Seepage	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
18:					
Eustis	85	Very limited		Very limited	
		Seepage	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
21:					
Bigbee	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
		Seepage	1.00		
22:					
Myatt	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.28
24:					
Hyde	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25:					
Quitman-------------	90	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.92
		Slow water movement	1.00	Seepage	0.53
26:					
Smithton------------	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
27:					
Johns---------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46		
28:					
Vancleave-----------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
		Depth to saturated zone	1.00	Depth to saturated zone	0.44
29:					
Vancleave-----------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
		Depth to saturated zone	1.00	Depth to saturated zone	0.44
				Slope	0.32
30:					
Vancleave-----------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	0.53
		Depth to saturated zone	1.00	Depth to saturated zone	0.44
32:					
Escambia------------	90	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Slow water movement	1.00	Seepage	0.53
33:					
Escambia------------	90	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Slow water movement	1.00	Seepage	0.53
				Slope	0.32

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
36:					
Smithdale-----------	55	Somewhat limited		Very limited	
		Slope	0.37	Seepage	1.00
				Slope	1.00
Boykin--------------	30	Somewhat limited		Very limited	
		Slope	0.37	Seepage	1.00
				Slope	1.00
44:					
Malbis--------------	85	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	1.00		
45:					
Malbis--------------	85	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Seepage	0.53
				Slope	0.32
		Slow water movement	1.00		
48:					
Suffolk-------------	90	Not limited		Very limited	
				Seepage	0.99
50:					
Ruston--------------	90	Not limited		Very limited	
				Seepage	0.99
51:					
Bama----------------	90	Not limited		Very limited	
				Seepage	0.99
52:					
Bama----------------	90	Not limited		Very limited	
				Seepage	0.99
				Slope	0.32
53:					
Bama----------------	90	Not limited		Very limited	
				Slope	1.00
				Seepage	0.99
55:					
Ocilla--------------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	0.94
56:					
Benndale------------	85	Not limited		Very limited	
				Seepage	0.99
				Slope	0.92

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
57:					
Poarch	85	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	1.00	Slope	0.32
58:					
Benndale	85	Somewhat limited		Very limited	
		Slope	0.16	Slope	1.00
				Seepage	0.99
62:					
Prentiss	90	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	1.00	Depth to saturated zone	0.44
63:					
Stough	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00		
66:					
Freest	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Slope	0.32
68:					
Saucier	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Seepage	0.53
		Depth to saturated zone	1.00		
76:					
Nugent	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage	1.00	Seepage	1.00
		Depth to saturated zone	0.65	Depth to saturated zone	0.02
Jena	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
				Seepage	0.99
78:					
Susquehanna	50	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.08
Freest	35	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to saturated zone	0.75
		Depth to saturated zone	1.00	Slope	0.08

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
79:					
Susquehanna	50	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
Freest	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to saturated zone	0.75
		Depth to saturated zone	1.00		
80:					
Susquehanna	90	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.16		
84:					
Wadley	90	Not limited		Very limited	
				Seepage	1.00
				Slope	0.08
85:					
Leon	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
		Seepage	1.00		
88:					
Croatan	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	1.00
Johnston	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
				Depth to saturated zone	1.00
		Seepage	1.00		
89:					
Udorthents	95	Not rated		Not rated	
90:					
Pits	95	Not rated		Not rated	
95:					
Axis	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
96:					
Handsboro-----------	85	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
97:					
Maurepas------------	85	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
226:					
Bayou---------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
328:					
Harleston-----------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Seepage	0.99
329:					
Harleston-----------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Seepage	0.99
				Slope	0.32
330:					
Harleston-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Slope	1.00
				Seepage	0.99
365:					
Duckston------------	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Flooding	0.40
386:					
Newhan--------------	55	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage	1.00	Slope	1.00
		Flooding	0.40	Flooding	0.40

Table 12a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
386:					
Corolla-------------	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Flooding	0.40
387:					
Beaches-------------	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Flooding	0.40
388:					
Latonia-------------	90	Very limited		Very limited	
		Seepage	1.00	Seepage	1.00
528:					
Columbus------------	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Seepage	0.99

Table 12b.--Sanitary Facilities (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2:							
Kinston	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Chastain	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Seepage	1.00				
Mantachie	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
3:							
Atmore	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50				
4:							
Lenoir	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	0.96
5:							
Benndale	85	Not limited		Not limited		Not limited	
6:							
Benndale	85	Not limited		Not limited		Not limited	
8:							
Latonia	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00		
12:							
Arat	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Too clayey	0.50
13:							
Daleville	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14:							
Daleville-----------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
16:							
Eustis--------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
17:							
Eustis--------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.04	Too sandy	0.50
		Slope	0.04			Slope	0.04
18:							
Eustis--------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.50			Too sandy	0.50
21:							
Bigbee--------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	0.50
		Seepage	1.00	Seepage	1.00		
22:							
Myatt---------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
24:							
Hyde----------------	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
25:							
Quitman-------------	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.92	Depth to saturated zone	0.95
		Too clayey	0.50			Too clayey	0.50
26:							
Smithton------------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
27:							
Johns---------------	90	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
		Too sandy	1.00			Depth to saturated zone	0.68

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
28:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.44	Depth to saturated zone	0.68
29:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.44	Depth to saturated zone	0.68
30:							
Vancleave-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.44	Depth to saturated zone	0.68
32:							
Escambia------------	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.75	Depth to saturated zone	0.86
33:							
Escambia------------	90	Very limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.75	Depth to saturated zone	0.86
36:							
Smithdale-----------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
Boykin--------------	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.37	Seepage	1.00	Slope	0.37
				Slope	0.37		
44:							
Malbis--------------	85	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.24			Depth to saturated zone	0.02
45:							
Malbis--------------	85	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.24			Depth to saturated zone	0.02
48:							
Suffolk-------------	90	Somewhat limited		Not limited		Somewhat limited	
		Too sandy	0.50			Too sandy	0.50
50:							
Ruston--------------	90	Not limited		Not limited		Not limited	
51:							
Bama----------------	90	Not limited		Not limited		Not limited	
52:							
Bama----------------	90	Not limited		Not limited		Not limited	
53:							
Bama----------------	90	Not limited		Not limited		Not limited	

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
55:							
Ocilla	85	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.96
		Depth to saturated zone	1.00	Seepage	1.00		
				Depth to saturated zone	0.94		
56:							
Benndale	85	Not limited		Not limited		Not limited	
57:							
Poarch	85	Somewhat limited		Not limited		Not limited	
		Depth to saturated zone	0.02				
58:							
Benndale	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
62:							
Prentiss	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.44	Depth to saturated zone	0.68
63:							
Stough	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
66:							
Freest	85	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.75	Hard to compact	1.00
		Too clayey	0.50			Depth to saturated zone	0.86
						Too clayey	0.50
68:							
Saucier	90	Somewhat limited		Not limited		Very limited	
		Too clayey	0.50			Hard to compact	1.00
		Depth to saturated zone	0.24			Too clayey	0.50
						Depth to saturated zone	0.02
76:							
Nugent	50	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	0.52
		Seepage	1.00	Seepage	1.00		
Jena	40	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
78:							
Susquehanna	50	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
78:							
Freest	35	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.75	Hard to compact	1.00
		Too clayey	0.50			Depth to saturated zone	0.86
						Too clayey	0.50
79:							
Susquehanna	50	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Freest	35	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.75	Hard to compact	1.00
		Too clayey	0.50			Depth to saturated zone	0.86
						Too clayey	0.50
80:							
Susquehanna	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.16	Too clayey	1.00
		Slope	0.16			Hard to compact	1.00
						Slope	0.16
84:							
Wadley	90	Somewhat limited		Very limited		Very limited	
		Too sandy	0.50	Seepage	1.00	Seepage	1.00
						Too sandy	0.50
85:							
Leon	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	0.50
		Too sandy	0.50			Seepage	0.21
88:							
Croatan	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.16
		Too acid	1.00	Seepage	1.00		
Johnston	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00		
89:							
Udorthents	95	Not rated		Not rated		Not rated	
90:							
Pits	95	Not rated		Not rated		Not rated	
95:							
Axis	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
96:							
Handsboro	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
97:							
Maurepas	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
226:							
Bayou	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
328:							
Harleston	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
329:							
Harleston	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
330:							
Harleston	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
365:							
Duckston	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Flooding	0.40	Seepage	1.00
386:							
Newhan	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Flooding	0.40	Seepage	1.00
		Sodium content	1.00	Slope	0.16	Sodium content	1.00
Corolla	40	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
		Too sandy	1.00	Flooding	0.40	Depth to saturated zone	0.68
387:							
Beaches	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Too sandy	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00

Table 12b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
388:							
Latonia-------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Seepage	1.00
528:							
Columbus------------	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.47
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		

Table 13a.--Construction Materials (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
2:					
Kinston	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Chastain	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Mantachie	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3:					
Atmore	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4:					
Lenoir	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.05
5:					
Benndale	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
6:					
Benndale	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8:					
Latonia	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.13
12:					
Arat	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
13:					
Daleville	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
14:					
Daleville	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
16:					
Eustis	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.69
17:					
Eustis	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.69
18:					
Eustis	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.69
21:					
Bigbee	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.12
		Thickest layer	0.00	Bottom layer	0.57
22:					
Myatt	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
24:					
Hyde	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
25:					
Quitman	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
26:					
Smithton	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
27:					
Johns	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.42
28:					
Vancleave	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
29:					
Vancleave	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
30:					
Vancleave	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
32:					
Escambia	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33:					
Escambia	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
36:					
Smithdale	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Boykin	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.10
44:					
Malbis	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
45:					
Malbis	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
48:					
Suffolk	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07
50:					
Ruston	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
51:					
Bama	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
52:					
Bama	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
53:					
Bama	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
55:					
Ocilla	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.10

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
56:					
Benndale------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
57:					
Poarch--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
58:					
Benndale------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
62:					
Prentiss------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
63:					
Stough--------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
66:					
Freest--------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
68:					
Saucier-------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
76:					
Nugent--------------	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.08
Jena----------------	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.08
78:					
Susquehanna---------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Freest--------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
79:					
Susquehanna---------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Freest--------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
80:					
Susquehanna---------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
84:					
Wadley--------------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.10
85:					
Leon----------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.47
		Thickest layer	0.00	Bottom layer	0.88
88:					
Croatan-------------	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
Johnston------------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
89:					
Udorthents----------	95	Not rated		Not rated	
90:					
Pits----------------	95	Not rated		Not rated	
95:					
Axis----------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.03
96:					
Handsboro-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
97:					
Maurepas------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
226:					
Bayou---------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
328:					
Harleston-----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.04
329:					
Harleston-----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.04

Table 13a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
330:					
Harleston-----------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.02
		Thickest layer	0.00	Thickest layer	0.04
365:					
Duckston------------	95	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.86
		Thickest layer	0.00	Thickest layer	0.86
386:					
Newhan--------------	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.73
		Thickest layer	0.00	Bottom layer	0.81
Corolla-------------	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.74
		Thickest layer	0.00	Bottom layer	0.89
387:					
Beaches-------------	95	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.93
		Thickest layer	0.00	Thickest layer	0.93
388:					
Latonia-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00	Bottom layer	0.13
528:					
Columbus------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03

Table 13b.--Construction Materials (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
2:							
Kinston-------------	40	Fair		Poor		Poor	
		Too acid	0.32	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00		
Chastain------------	30	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.20				
		Water erosion	0.99	Shrink-swell	0.91	Too clayey	0.00
Mantachie-----------	20	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.04	Depth to saturated zone	0.04
		Organic matter content low	0.50				
3:							
Atmore--------------	90	Fair		Poor		Poor	
		Organic matter content low	0.08	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.50				
		Water erosion	0.99				
4:							
Lenoir--------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.08	Depth to saturated zone	0.29	Depth to saturated zone	0.29
		Organic matter content low	0.50	Shrink-swell	0.90		
5:							
Benndale------------	85	Fair		Good		Good	
		Organic matter content low	0.08				
		Too acid	0.32				
6:							
Benndale------------	85	Fair		Good		Good	
		Too acid	0.32				
		Organic matter content low	0.50				
8:							
Latonia-------------	90	Poor		Good		Good	
		Wind erosion	0.00				
		Organic matter content low	0.08				
		Too acid	0.32				
12:							
Arat----------------	95	Fair		Poor		Poor	
		Too acid	0.84	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.90				

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
13:							
Daleville	90	Fair		Poor		Poor	
		Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Organic matter content low	0.50	Low strength	0.00		
		Water erosion	0.99	Shrink-swell	0.87		
14:							
Daleville	90	Fair		Poor		Poor	
		Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Organic matter content low	0.50	Low strength	0.00		
		Water erosion	0.99	Shrink-swell	0.87		
16:							
Eustis	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Organic matter content low	0.08				
17:							
Eustis	85	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.96
		Organic matter content low	0.08				
18:							
Eustis	85	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Slope	0.00
		Organic matter content low	0.08				
21:							
Bigbee	90	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Organic matter content low	0.08				
22:							
Myatt	90	Fair		Poor		Poor	
		Too acid	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Organic matter content low	0.50				
24:							
Hyde	90	Fair		Poor		Poor	
		Too acid	0.08	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Water erosion	0.90	Low strength	0.00		
25:							
Quitman	90	Fair		Poor		Fair	
		Organic matter content low	0.08	Low strength	0.00	Depth to saturated zone	0.32
		Too acid	0.50	Depth to saturated zone	0.32	Too clayey	0.52
		Too clayey	0.92				

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
26:							
Smithton	90	Fair		Poor		Poor	
		Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
27:							
Johns	90	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Organic matter content low	0.02				
		Too acid	0.50				
28:							
Vancleave	85	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Organic matter content low	0.08				
		Too acid	0.32				
29:							
Vancleave	85	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Organic matter content low	0.08				
		Too acid	0.32				
30:							
Vancleave	85	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Organic matter content low	0.08				
		Too acid	0.32				
32:							
Escambia	90	Fair		Fair		Fair	
		Too acid	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Organic matter content low	0.50				
33:							
Escambia	90	Fair		Fair		Fair	
		Too acid	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Organic matter content low	0.50				
36:							
Smithdale	55	Fair		Good		Fair	
		Too acid	0.32			Slope	0.63
		Organic matter content low	0.50				
Boykin	30	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00			Slope	0.63
		Organic matter content low	0.08				

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
44:							
Malbis--------------	85	Fair		Fair		Good	
		Organic matter content low	0.08	Low strength	0.78		
		Too acid	0.32				
45:							
Malbis--------------	85	Fair		Fair		Good	
		Organic matter content low	0.08	Low strength	0.78		
		Too acid	0.32				
48:							
Suffolk-------------	90	Poor		Good		Good	
		Wind erosion	0.00				
		Organic matter content low	0.02				
		Too acid	0.50				
50:							
Ruston--------------	90	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
51:							
Bama----------------	90	Fair		Good		Good	
		Organic matter content low	0.08				
		Too acid	0.32				
52:							
Bama----------------	90	Fair		Good		Good	
		Organic matter content low	0.08				
		Too acid	0.32				
53:							
Bama----------------	90	Fair		Good		Good	
		Organic matter content low	0.08				
		Too acid	0.32				
55:							
Ocilla--------------	85	Poor		Fair		Fair	
		Wind erosion	0.00	Depth to saturated zone	0.29	Too sandy	0.01
		Too sandy	0.01			Depth to saturated zone	0.29
		Organic matter content low	0.12				
56:							
Benndale------------	85	Fair		Good		Good	
		Too acid	0.32				
		Organic matter content low	0.50				
57:							
Poarch--------------	85	Fair		Good		Good	
		Organic matter content low	0.08				
		Too acid	0.32				

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
58:							
Benndale------------	85	Fair		Good		Fair	
		Too acid	0.32			Slope	0.84
		Organic matter content low	0.50				
62:							
Prentiss------------	90	Fair		Fair		Fair	
		Organic matter content low	0.02	Depth to saturated zone	0.76	Depth to saturated zone	0.76
		Too acid	0.50				
		Water erosion	0.99				
63:							
Stough--------------	90	Fair		Fair		Fair	
		Organic matter content low	0.08	Depth to saturated zone	0.04	Depth to saturated zone	0.04
		Too acid	0.50				
		Water erosion	0.99				
66:							
Freest--------------	85	Fair		Poor		Fair	
		Organic matter content low	0.08	Low strength	0.00	Depth to saturated zone	0.53
				Shrink-swell	0.29		
		Too acid	0.50	Depth to saturated zone	0.53		
68:							
Saucier-------------	90	Fair		Poor		Fair	
		Organic matter content low	0.02	Low strength	0.00	Rock fragments	0.94
		Too acid	0.50				
76:							
Nugent--------------	50	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.30
		Too sandy	0.30				
		Too acid	0.50				
Jena----------------	40	Fair		Good		Good	
		Too acid	0.32				
		Organic matter content low	0.88				
78:							
Susquehanna---------	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.08	Shrink-swell	0.12		
		Too acid	0.50				
Freest--------------	35	Fair		Poor		Fair	
		Organic matter content low	0.08	Low strength	0.00	Depth to saturated zone	0.53
				Shrink-swell	0.29		
		Too acid	0.50	Depth to saturated zone	0.53		

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
79:							
Susquehanna	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.08	Shrink-swell	0.12		
		Too acid	0.50				
Freest	35	Fair		Poor		Fair	
		Organic matter content low	0.08	Low strength	0.00	Depth to saturated zone	0.53
		Too acid	0.50	Shrink-swell	0.29		
				Depth to saturated zone	0.53		
80:							
Susquehanna	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.08	Shrink-swell	0.12	Slope	0.84
		Too acid	0.50				
84:							
Wadley	90	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Too sandy	0.01				
		Organic matter content low	0.08				
85:							
Leon	85	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
		Too acid	0.50			Depth to saturated zone	0.00
		Droughty	0.57				
88:							
Croatan	50	Poor		Poor		Poor	
		Too acid	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
Johnston	40	Fair		Poor		Poor	
		Too acid	0.32	Depth to saturated zone	0.00	Depth to saturated zone	0.00
89:							
Udorthents	95	Not rated		Not rated		Not rated	
90:							
Pits	95	Not rated		Not rated		Not rated	
95:							
Axis	85	Good		Poor		Poor	
				Depth to saturated zone	0.00	Depth to saturated zone	0.00
						Salinity	0.50
96:							
Handsboro	85	Poor		Poor		Poor	
		Salinity	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
						Salinity	0.50

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
97:							
Maurepas------------	85	Poor		Poor		Poor	
		Salinity	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
						Salinity	0.50
226:							
Bayou---------------	85	Fair		Poor		Poor	
		Too acid	0.32	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Organic matter content low	0.50				
328:							
Harleston-----------	90	Fair		Fair		Fair	
		Too acid	0.12	Depth to saturated zone	0.89	Depth to saturated zone	0.89
		Organic matter content low	0.50				
329:							
Harleston-----------	90	Fair		Fair		Fair	
		Too acid	0.12	Depth to saturated zone	0.89	Depth to saturated zone	0.89
		Organic matter content low	0.50				
330:							
Harleston-----------	85	Fair		Fair		Fair	
		Too acid	0.12	Depth to saturated zone	0.89	Depth to saturated zone	0.89
		Organic matter content low	0.50				
365:							
Duckston------------	95	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
		Wind erosion	0.00			Depth to saturated zone	0.00
		Droughty	0.00			Sodium content	0.00
386:							
Newhan--------------	55	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Sodium content	0.00
		Droughty	0.00			Salinity	0.00
Corolla-------------	40	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.76	Too sandy	0.00
		Wind erosion	0.00			Sodium content	0.00
		Droughty	0.00			Salinity	0.00
387:							
Beaches-------------	95	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Hard to reclaim	0.00
		Wind erosion	0.00			Too sandy	0.00
		Salinity	0.00			Salinity	0.00
388:							
Latonia-------------	90	Poor		Good		Good	
		Wind erosion	0.00				
		Organic matter content low	0.08				
		Too acid	0.32				

Table 13b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
528:							
Columbus------------	90	Fair		Fair		Fair	
		Too acid	0.32	Depth to saturated zone	0.89	Depth to saturated zone	0.89
		Organic matter content low	0.50				
		Water erosion	0.99				

Table 14.--Water Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2:							
Kinston	40	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
Chastain	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.10		
				Piping	0.01		
Mantachie	20	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	1.00		
3:							
Atmore	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	1.00		
4:							
Lenoir	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.29		
				Seepage	0.05		
5:							
Benndale	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
6:							
Benndale	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
8:							
Latonia	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.13	Depth to water	1.00
12:							
Arat	95	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Ponding	1.00	Slow refill	0.28
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	0.98		
13:							
Daleville	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	0.68		

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
14:							
Daleville----------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Ponding	1.00	Slow refill	0.28
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	0.63		
16:							
Eustis-------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.69	Depth to water	1.00
17:							
Eustis-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.69	Depth to water	1.00
18:							
Eustis-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.69	Depth to water	1.00
		Slope	0.03				
21:							
Bigbee-------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.57	Cutbanks cave	1.00
						Depth to saturated zone	0.99
22:							
Myatt--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.54	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	1.00		
24:							
Hyde---------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.04	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	1.00		
25:							
Quitman------------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	0.90		
26:							
Smithton-----------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	1.00		
27:							
Johns--------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.95	Cutbanks cave	1.00
						Depth to saturated zone	0.02
				Seepage	0.42		
28:							
Vancleave----------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.95		

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29:							
Vancleave-----------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.95		
30:							
Vancleave-----------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.95		
32:							
Escambia------------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	0.99	Depth to water	1.00
				Piping	0.99		
				Seepage	0.01		
33:							
Escambia------------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Depth to saturated zone	0.99	Depth to water	1.00
				Piping	0.99		
				Seepage	0.01		
36:							
Smithdale-----------	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.01				
Boykin--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
		Slope	0.01				
44:							
Malbis--------------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.24		
45:							
Malbis--------------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.24		
48:							
Suffolk-------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
50:							
Ruston--------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.82	Depth to water	1.00
51:							
Bama----------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52:							
Bama	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
53:							
Bama	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
55:							
Ocilla	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to water	1.00
				Seepage	0.10		
56:							
Benndale	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
57:							
Poarch	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.02		
58:							
Benndale	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
62:							
Prentiss	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Depth to saturated zone	0.95		
63:							
Stough	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	1.00	Depth to water	1.00
				Piping	1.00		
66:							
Freest	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	0.99	Depth to water	1.00
68:							
Saucier	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.72	Depth to saturated zone	0.24	Depth to water	1.00
				Piping	0.05		
76:							
Nugent	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Cutbanks cave	1.00
						Depth to saturated zone	0.99
Jena	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Depth to water	1.00

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78:							
Susquehanna	50	Not limited		Very limited		Very limited	
				Hard to pack	0.99	Depth to water	1.00
Freest	35	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	0.99	Depth to water	1.00
79:							
Susquehanna	50	Not limited		Very limited		Very limited	
				Hard to pack	0.99	Depth to water	1.00
Freest	35	Somewhat limited		Very limited		Very limited	
		Seepage	0.04	Depth to saturated zone	0.99	Depth to water	1.00
80:							
Susquehanna	90	Not limited		Very limited		Very limited	
				Hard to pack	0.99	Depth to water	1.00
84:							
Wadley	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
85:							
Leon	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.88		
88:							
Croatan	50	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Seepage	0.03		
Johnston	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
89:							
Udorthents	95	Not rated		Not rated		Not rated	
90:							
Pits	95	Not rated		Not rated		Not rated	
95:							
Axis	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
				Piping	1.00	Salinity and saturated zone	0.06
				Seepage	0.03		
96:							
Handsboro	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Salinity and saturated zone	1.00
						Cutbanks cave	0.10

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97:							
Maurepas------------	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
226:							
Bayou---------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
				Piping	1.00	Cutbanks cave	0.10
				Seepage	0.04		
328:							
Harleston-----------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	0.10
				Seepage	0.04	Depth to saturated zone	0.06
329:							
Harleston-----------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	0.10
				Seepage	0.04	Depth to saturated zone	0.06
330:							
Harleston-----------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	0.10
				Seepage	0.04	Depth to saturated zone	0.06
365:							
Duckston------------	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Piping	1.00	Salinity and saturated zone	0.78
				Seepage	0.86		
386:							
Newhan--------------	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
				Seepage	0.81		
				Salinity	0.12		
Corolla-------------	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.95	Salinity and saturated zone	0.50
				Seepage	0.89	Depth to saturated zone	0.02
387:							
Beaches-------------	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Salinity	1.00	Salinity and saturated zone	1.00
				Seepage	0.93		

Table 14.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
388:							
Latonia-------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.13	Depth to water	1.00
528:							
Columbus------------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	0.86	Cutbanks cave	0.10
				Seepage	0.03	Depth to saturated zone	0.06

Table 15.--Engineering Index Properties

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
2:												
Kinston---------	0-6	Fine sandy loam	SC-SM, SM, SC	A-4, A-2	0	0	100	98-100	55-100	25-49	20-35	NP-10
	6-56	Loam, clay loam, sandy clay loam	CL	A-6, A-4, A-7	0	0	100	95-100	75-100	60-95	20-45	8-22
	56-86	Variable	---	---	0	0	---	---	---	---	---	---
Chastain--------	0-2	Clay loam	ML, CL, CL-ML	A-6, A-4, A-7	0	0	100	100	95-100	85-98	30-45	10-30
	2-55	Silty clay loam, clay loam, clay	MH, CL, CH	A-6, A-7	0	0	100	100	95-100	85-98	35-75	12-40
	55-74	Loamy sand, sand, fine sand	SP-SM, SP, SM	A-2, A-3	0	0	90-100	85-100	51-90	4-25	0-14	NP
Mantachie-------	0-9	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	90-100	60-85	40-60	0-20	NP-5
	9-70	Loam, clay loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	95-100	90-100	80-95	45-80	20-40	5-15
3:												
Atmore----------	0-4	Loam	ML	A-4	0	0	90-100	90-100	85-100	60-90	0-32	NP-7
	4-35	Loam, silt loam, sandy loam	ML, CL-ML	A-4	0	0	80-100	80-100	80-96	55-80	0-25	NP-7
	35-81	Loam, clay loam, sandy loam	ML, SC, SM, CL	A-4, A-6	0	0	78-100	75-100	70-96	40-70	20-40	2-18
4:												
Lenoir----------	0-13	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	85-98	60-85	20-35	3-10
	13-62	Clay, silty clay, clay loam	CH, CL	A-7, A-6	0	0	100	100	85-99	55-95	40-65	11-35
	62-84	Sandy loam, sandy clay loam, clay loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0	0	100	85-100	70-98	40-75	20-35	3-10

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
5:												
Benndale--------	0-6	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4, A-2-4	0	0	100	100	60-96	30-55	0-25	NP-7
	6-44	Loam, sandy loam, fine sandy loam	CL-ML, SM, SC-SM, ML	A-4	0	0	100	100	70-95	40-75	15-22	3-7
	44-74	Loam, sandy loam, sandy clay loam	SM, ML, SC-SM, CL-ML	A-4, A-6	0	0	100	100	70-98	40-75	15-38	3-15
	74-81	Loam, sandy loam, loamy sand	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	95-100	95-100	60-95	25-65	0-25	NP-5
6:												
Benndale--------	0-6	Fine sandy loam	ML, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	60-96	30-55	0-25	NP-7
	6-44	Loam, sandy loam, fine sandy loam	SC-SM, SM, ML, CL-ML	A-4	0	0	100	100	70-95	40-75	15-22	3-7
	44-74	Loam, sandy loam, sandy clay loam	CL-ML, ML, SC-SM, SM	A-6, A-4	0	0	100	100	70-98	40-75	15-38	3-15
	74-81	Loam, sandy loam, loamy sand	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	95-100	95-100	60-95	25-65	0-25	NP-5
8:												
Latonia---------	0-6	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	15-35	0-14	NP
	6-44	Sandy loam, loam, fine sandy loam	SM	A-4, A-2-4	0	0	90-100	85-100	60-85	30-50	0-14	NP
	44-80	Sand, loamy sand	SP-SM, SM	A-2-4	0	0	90-100	85-100	50-75	10-30	0-14	NP
12:												
Arat------------	0-12	Mucky silt loam	OL, CL-ML, CL	A-4, A-6	0	0	100	100	90-100	70-95	18-40	NP-22
	12-84	Mucky silt loam, silt loam, silty clay loam	CL, CL-ML, ML, OL	A-6, A-4	0	0	100	100	90-100	75-95	0-40	NP-22
13:												
Daleville-------	0-8	Silt loam	ML, CL-ML	A-4	0	0	100	100	85-100	60-90	0-30	NP-7
	8-62	Clay loam, loam, sandy clay loam	CL	A-6	0	0	100	100	90-100	70-80	28-38	11-20

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
14:												
Daleville-------	0-8	Loam	CL-ML, ML	A-4	0	0	100	100	85-100	60-90	0-30	NP-7
	8-80	Clay loam, loam, sandy clay loam	CL	A-6	0	0	100	100	90-100	70-80	28-38	11-20
16:												
Eustis----------	0-5	Loamy sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	90-100	5-16	0-14	NP
	5-30	Sand, fine sand, loamy fine sand	SP-SM, SM	A-3, A-2-4	0	0	100	100	90-100	5-16	0-14	NP
	30-70	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	90-100	15-25	0-14	NP
	70-82	Sand, fine sand	SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-12	0-14	NP
17:												
Eustis----------	0-5	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-16	0-14	NP
	5-30	Sand, fine sand, loamy fine sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-16	0-14	NP
	30-70	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	90-100	15-25	0-14	NP
	70-82	Sand, fine sand	SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-12	0-14	NP
18:												
Eustis----------	0-5	Loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-16	0-14	NP
	5-30	Sand, fine sand, loamy fine sand	SP-SM, SM	A-2-4, A-3	0	0	100	100	90-100	5-16	0-14	NP
	30-70	Loamy fine sand, loamy sand	SM	A-2-4	0	0	100	100	90-100	15-25	0-14	NP
	70-82	Sand, fine sand	SP-SM	A-2-4, A-3	0	0	100	100	90-100	5-12	0-14	NP
21:												
Bigbee----------	0-5	Loamy sand	SM	A-2-4	0	0	100	95-100	60-90	15-30	0-14	NP
	5-41	Loamy sand	SP-SM, SM	A-3, A-2-4	0	0	85-100	85-100	50-75	5-20	0-14	NP
	41-93	Sand, fine sand	SP-SM, SM	A-3, A-2-4	0	0	85-100	85-100	50-75	5-20	0-14	NP

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
22:												
Myatt-----------	0-9	Loam	ML, CL-ML	A-4	0	0	95-100	95-100	70-100	60-90	5-25	5-10
	9-50	Loam, sandy clay loam, clay loam	CL, ML, SC, SM	A-4	0	0	95-100	95-100	80-100	40-80	10-30	10-40
	50-84	Fine sandy loam, sandy loam, sand	SC, SC-SM, CL-ML, CL	A-2, A-4	0	0	95-100	95-100	30-75	20-40	0-25	NP-5
24:												
Hyde------------	0-14	Silt loam	ML	A-4	0	0	100	98-100	85-100	60-90	25-35	NP-7
	14-56	Clay loam, loam, silty clay loam	CL	A-4, A-6, A-7	0	0	100	98-100	90-100	75-95	22-42	7-20
	56-80	Variable	---	---	0	0	---	---	---	---	---	---
25:												
Quitman---------	0-11	Silt loam	ML, SM	A-2, A-4	0	0	100	100	85-100	75-95	0-20	NP-3
	11-22	Silt loam, silty clay loam, clay loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	75-95	20-35	4-15
	22-65	Silty clay loam, loam, clay loam	CL, ML, CL-ML	A-6, A-7	0	0	100	100	95-100	75-100	25-45	11-20
26:												
Smithton--------	0-3	Loam	ML, CL-ML	A-4	0	0	95-100	95-100	85-95	50-75	15-25	NP-7
	3-38	Fine sandy loam, sandy loam, loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	95-100	60-95	30-75	20-25	NP-5
	38-82	Sandy loam, loam, sandy clay loam	CL, CL-ML, SC-SM, SC	A-2, A-4, A-6	0	0	95-100	95-100	60-95	30-95	15-35	NP-13
27:												
Johns-----------	0-7	Loamy fine sand	SM	A-2, A-4	0	0	100	95-100	60-90	15-45	15-20	NP
	7-34	Sandy clay loam, sandy loam, clay loam	CL-ML, SC, SC-SM, CL	A-7, A-6, A-2, A-4	0	0	100	95-100	60-98	30-65	20-45	5-25
	34-82	Sand, loamy sand, coarse sand	SP-SM, SP, SM	A-2, A-3	0	0	95-100	95-100	51-90	4-25	10-20	NP

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
28:												
Vancleave-------	0-11	Loamy sand	CL-ML, SM, SC-SM, ML	A-2, A-4	0	0	100	100	70-100	30-60	0-25	NP-6
	11-22	Loam, sandy loam	SC, ML, CL-ML, CL	A-4	0	0	100	100	65-98	40-70	20-34	3-12
	22-51	Loam, sandy clay loam, sandy loam	SC, SC-SM, CL-ML, CL	A-4, A-6	0	0	100	90-100	70-92	35-65	25-35	4-12
	51-90	Sandy clay loam, clay loam, fine sandy loam	SC, CL-ML, CL, SC-SM	A-6, A-4	0	0	100	90-100	70-99	35-70	20-40	4-20
29:												
Vancleave-------	0-11	Loamy sand	SM, SC-SM, CL-ML, ML	A-4, A-2	0	0	100	100	70-100	30-60	0-25	NP-6
	11-22	Loam, sandy loam	CL, CL-ML, ML, SC	A-4	0	0	100	100	65-98	40-70	20-34	3-12
	22-51	Loam, sandy clay loam, sandy loam	CL, SC, CL-ML, SC-SM	A-4, A-6	0	0	100	90-100	70-92	35-65	25-35	4-12
	51-90	Sandy clay loam, clay loam, fine sandy loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	100	90-100	70-99	35-70	20-40	4-20
30:												
Vancleave-------	0-11	Loamy sand	SM, SC-SM, ML, CL-ML	A-4, A-2	0	0	100	100	70-100	30-60	0-25	NP-6
	11-22	Loam, sandy loam	SC, CL, CL-ML, ML	A-4	0	0	100	100	65-98	40-70	20-34	3-12
	22-51	Loam, sandy clay loam, sandy loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	100	90-100	70-92	35-65	25-35	4-12
	51-90	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-6, A-4	0	0	100	90-100	70-99	35-70	20-40	4-20

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
32:												
Escambia--------	0-4	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	95-100	95-100	70-90	40-65	0-25	NP-7
	4-44	Fine sandy loam, loam, silt loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	95-100	95-100	70-95	40-75	16-30	4-15
	44-85	Sandy clay loam, loam, clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	87-95	87-95	60-95	35-80	20-40	4-20
33:												
Escambia--------	0-4	Very fine sandy loam	ML, CL-ML, SM, SC-SM	A-4	0	0	95-100	95-100	70-90	40-65	0-25	NP-7
	4-44	Fine sandy loam, loam, silt loam	SC, CL, SC-SM, CL-ML	A-4, A-6	0	0	95-100	95-100	70-95	40-75	16-30	4-15
	44-85	Sandy clay loam, loam, clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	87-95	87-95	60-95	35-80	20-40	4-20
36:												
Smithdale-------	0-13	Fine sandy loam	SM	A-4	0	0	100	85-100	50-75	15-30	0-25	NP-5
	13-42	Clay loam, sandy clay loam, loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	100	85-100	80-96	45-75	23-38	7-16
	42-64	Loam, sandy loam	SC, SM, CL, ML	A-4	0	0	100	85-100	65-95	36-70	0-30	NP-10
Boykin----------	0-22	Loamy sand	SM	A-2	0	0	100	95-100	75-98	17-45	16-25	NP-25
	22-80	Sandy clay loam	CL, SC-SM, SC	A-6, A-4	0	0	100	95-100	75-98	17-45	16-25	NP-25
44:												
Malbis----------	0-8	Fine sandy loam	ML, SM	A-4	0	0	100	97-100	91-97	40-62	0-30	NP-5
	8-27	Loam, sandy clay loam, clay loam	CL, CL-ML	A-4, A-6	0	0	99-100	95-100	80-100	55-70	21-35	5-11
	27-61	Sandy clay loam, clay loam, loam	ML, CL	A-4, A-6, A-7	0	0	98-100	96-100	90-100	56-80	29-49	4-15
	61-80	Sandy clay loam, clay loam	CL, ML	A-4, A-5, A-6, A-7	0	0	98-100	96-100	90-100	56-80	30-49	4-15

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
45:												
Malbis----------	0-8	Fine sandy loam	ML, SM	A-4	0	0	100	97-100	91-97	40-62	0-30	NP-5
	8-27	Loam, sandy clay loam, clay loam	CL, CL-ML	A-4, A-6	0	0	99-100	95-100	80-100	55-70	21-35	5-11
	27-61	Sandy clay loam, clay loam, loam	ML, CL	A-7, A-4, A-6	0	0	98-100	96-100	90-100	56-80	29-49	4-15
	61-80	Sandy clay loam, clay loam	ML, CL	A-4, A-5, A-6, A-7	0	0	98-100	96-100	90-100	56-80	30-49	4-15
48:												
Suffolk---------	0-6	Loamy sand	SM, SC-SM	A-4, A-2, A-1	0	0	95-100	90-100	40-85	15-40	0-18	NP-6
	6-37	Sandy clay loam, clay loam, loam	SC, CL	A-2, A-6	0	0	95-100	90-100	50-95	25-75	20-40	10-25
	37-86	Loamy fine sand, fine sand, loamy sand	SP, SC-SM, SM	A-1, A-2, A-3, A-4	0	0	75-100	60-100	30-80	3-50	0-18	NP-6
50:												
Ruston----------	0-11	Fine sandy loam	ML, CL-ML, SM	A-2-4, A-4	0	0	100	85-100	65-85	30-55	0-20	NP-7
	11-30	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	85-100	80-95	36-75	25-45	11-20
	30-36	Fine sandy loam, sandy loam, loamy sand	SM, SC-SM, ML, CL-ML	A-2-4, A-4	0	0	100	85-100	65-85	30-75	0-27	NP-7
	36-84	Sandy clay loam, loam, clay loam	CL, SC	A-6, A-7-6	0	0	100	85-100	80-95	36-75	25-45	11-20
51:												
Bama------------	0-10	Fine sandy loam	CL-ML, SC, SC-SM, SM	A-4	0	0	95-100	85-100	70-95	40-70	0-30	NP-10
	10-48	Loam, sandy clay loam	SC-SM, SM, SC, CL-ML	A-4, A-6	0	0	90-100	85-100	80-95	36-70	15-35	2-15
	48-84	Loam, sandy clay loam, clay loam	CL, SC	A-4, A-6	0	0	85-100	80-100	80-95	40-70	20-40	8-18

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
52:												
Bama------------	0-10	Fine sandy loam	CL-ML, SC, SC-SM, SM	A-4	0	0	95-100	85-100	70-95	40-70	0-30	NP-10
	10-48	Loam, sandy clay loam	CL-ML, SC, SC-SM, SM	A-4, A-6	0	0	90-100	85-100	80-95	36-70	15-35	2-15
	48-84	Loam, sandy clay loam, clay loam	SC, CL	A-4, A-6	0	0	85-100	80-100	80-95	40-70	20-40	8-18
53:												
Bama------------	0-10	Fine sandy loam	SC, CL-ML, SC-SM, SM	A-4	0	0	95-100	85-100	70-95	40-70	0-30	NP-10
	10-48	Loam, sandy clay loam	CL-ML, SM, SC, SC-SM	A-4, A-6	0	0	90-100	85-100	80-95	36-70	15-35	2-15
	48-84	Loam, sandy clay loam, clay loam	CL, SC	A-4, A-6	0	0	85-100	80-100	80-95	40-70	20-40	8-18
55:												
Ocilla----------	0-27	Loamy sand	SM, SP-SM	A-3, A-2	0	0	100	95-100	75-100	8-35	0-14	NP
	27-86	Sandy clay loam, sandy loam, clay loam	CL, SC	A-4, A-6, A-7	0	0	100	95-100	80-100	36-60	20-45	7-20
56:												
Benndale--------	0-6	Fine sandy loam	ML, SC-SM, SM, CL-ML	A-2-4, A-4	0	0	100	100	60-96	30-55	0-25	NP-7
	6-44	Loam, sandy loam, fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	70-95	40-75	15-22	3-7
	44-74	Loam, sandy loam, sandy clay loam	ML, SM, SC-SM, CL-ML	A-4, A-6	0	0	100	100	70-98	40-75	15-38	3-15
	74-81	Loam, sandy loam, loamy sand	CL-ML, SC-SM, SM, ML	A-4, A-2	0	0	95-100	95-100	60-95	25-65	0-25	NP-5
57:												
Poarch----------	0-10	Fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0	95-100	95-100	70-95	30-50	15-25	NP-5
	10-73	Loam, sandy loam, silt loam	ML, CL, CL-ML	A-4	0	0	95-100	95-100	85-95	51-75	20-30	NP-10
	73-81	Loam, fine sandy loam, silt loam	CL, CL-ML, ML	A-4	0	0	85-100	85-100	85-95	51-75	20-30	2-10

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
58:												
Benndale--------	0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	100	100	60-96	30-55	0-25	NP-7
	6-44	Loam, sandy loam, fine sandy loam	CL-ML, SC-SM, SM, ML	A-4	0	0	100	100	70-95	40-75	15-22	3-7
	44-74	Loam, sandy loam, sandy clay loam	SM, SC-SM, ML, CL-ML	A-6, A-4	0	0	100	100	70-98	40-75	15-38	3-15
	74-81	Loam, sandy loam, loamy sand	SM, ML, SC-SM, CL-ML	A-2, A-4	0	0	95-100	95-100	60-95	25-65	0-25	NP-5
62:												
Prentiss--------	0-5	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	75-100	50-90	0-30	NP-10
	5-23	Loam, sandy loam	CL, CL-ML, ML	A-2, A-4	0	0	100	100	75-100	50-90	0-30	NP-10
	23-80	Loam, sandy loam, fine sandy loam	CL-ML, SC, SC-SM, CL	A-4, A-6	0	0	100	100	70-100	40-75	20-35	4-12
63:												
Stough----------	0-5	Loam	ML, CL-ML	A-4	0	0	100	100	75-95	50-65	0-25	NP-7
	5-12	Loam, fine sandy loam, sandy loam	CL, CL-ML, ML	A-4	0	0	100	100	75-95	50-75	0-25	8-15
	12-69	Sandy loam, sandy clay loam, loam	SC	A-6, A-4	0	0	100	100	65-90	40-65	25-40	NP-7
66:												
Freest----------	0-6	Sandy loam	CL, CL-ML, ML, SM	A-4	0	0	100	95-100	60-90	40-70	0-30	NP-8
	6-23	Loam, sandy clay loam	CL	A-4, A-6	0	0	100	95-100	80-95	55-75	25-40	7-20
	23-88	Clay loam, clay, silty clay	CH, CL	A-7	0	0	100	95-100	90-100	80-95	41-55	20-30

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
68:												
Saucier---------	0-5	Fine sandy loam	SM, SC-SM, ML	A-4	0	0	90-100	85-100	70-86	40-55	0-20	NP-4
	5-27	Loam, clay loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	80-100	78-95	75-95	40-75	25-38	5-15
	27-39	Loam, clay loam, sandy clay loam	CL, CL-ML, SC-SM, SC	A-4, A-6, A-7	0	0	80-100	75-100	70-100	40-95	28-48	6-25
	39-70	Clay, silty clay loam, clay loam	CL, CH	A-6, A-7	0	0	100	90-100	90-100	80-90	47-60	22-34
76:												
Nugent----------	0-6	Loamy sand	SM, SP-SM	A-2	0	0	95-100	95-100	50-100	10-30	0-14	NP
	6-60	Stratified sand to fine sandy loam	SM, SP-SM	A-2	0	0	95-100	95-100	60-100	10-30	0-25	NP-3
Jena------------	0-6	Fine sandy loam	ML, CL-ML, SC-SM, SM	A-4, A-2-4	0	0	100	100	60-85	25-55	10-28	NP-10
	6-46	Sandy loam, fine sandy loam, loam	CL, CL-ML, SC-SM	A-2-4, A-4	0	0	100	100	55-90	25-70	15-30	5-10
	46-65	Fine sandy loam, sandy loam, loamy fine sand	SM	A-2-4, A-4	0	0	100	100	50-80	20-50	0-14	NP
78:												
Susquehanna-----	0-5	Silt loam	ML, SM	A-4	0	0	100	100	65-90	40-55	0-14	NP
	5-80	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	88-100	80-98	50-90	28-56
Freest----------	0-6	Sandy loam	CL, CL-ML, ML, SM	A-4	0	0	100	95-100	60-90	40-70	0-30	NP-8
	6-23	Loam, sandy clay loam	CL	A-6, A-4	0	0	100	95-100	80-95	55-75	25-40	7-20
	23-88	Clay loam, clay, silty clay	CH, CL	A-6, A-7	0	0	100	95-100	90-100	80-95	41-55	20-30

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
79:												
Susquehanna-----	0-5	Silt loam	ML, SM	A-4	0	0	100	100	65-90	40-55	0-14	NP
	5-80	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	88-100	80-98	50-90	28-56
Freest----------	0-6	Sandy loam	SM, CL-ML, CL, ML	A-4	0	0	100	95-100	60-90	40-70	0-30	NP-8
	6-23	Loam, sandy clay loam	CL	A-6, A-4	0	0	100	95-100	80-95	55-75	25-40	7-20
	23-88	Clay loam, clay, silty clay	CH, CL	A-6, A-7	0	0	100	95-100	90-100	80-95	41-55	20-30
80:												
Susquehanna-----	0-5	Silt loam	ML, SM	A-4	0	0	100	100	65-90	40-55	0-14	NP
	5-80	Clay, silty clay loam, silty clay	CH	A-7	0	0	100	100	88-100	80-98	50-90	28-56
84:												
Wadley----------	0-72	Loamy sand	SM, SP-SM	A-2	0	0	98-100	95-100	75-100	10-40	0-14	NP
	72-100	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-6, A-4, A-2	0	0	100	95-100	70-100	20-50	0-40	NP-17
85:												
Leon------------	0-6	Mucky sand	SP-SM	A-2-4, A-3	0	0	100	100	80-100	5-12	0-0	NP
	6-13	Sand, fine sand	SP-SM, SP	A-3, A-2-4	0	0	100	100	80-100	2-12	0-14	NP
	13-38	Sand, fine sand, loamy sand	SP-SM, SP, SM	A-3, A-2-4	0	0	100	100	80-100	3-20	0-14	NP
	38-62	Sand, fine sand	SP, SP-SM	A-3, A-2-4	0	0	100	100	80-100	2-12	0-0	NP
88:												
Croatan---------	0-16	Muck	PT		0	0	---	---	---	---	---	---
	16-50	Sandy loam, fine sandy loam, mucky sandy loam	SC, SC-SM, SM	A-4, A-2	0	0	100	100	60-85	25-49	25-35	NP-10
	50-66	Loam, clay loam, sandy clay loam	CL, ML, SC, SM	A-4, A-6	0	0	100	100	75-100	36-95	18-45	NP-15
	66-85	Variable	---	---	0	0	100	100	75-100	36-95	18-45	NP-15

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
88:												
Johnston--------	0-26	Mucky loam	ML, CL-ML, OL	A-4, A-5, A-6, A-7-5	0	0	100	100	90-100	51-75	20-45	2-14
	26-48	Stratified sandy loam to fine sandy loam	SM	A-4, A-2	0	0	100	100	50-100	25-49	15-35	NP-10
	48-68	Stratified sand to loamy sand	SP-SM, SM	A-3, A-2	0	0	100	100	50-100	5-30	15-20	NP
89:												
Udorthents------	0-80	---	---	---	---	---	---	---	---	---	---	---
90:												
Pits------------	0-80	---	---	---	---	---	---	---	---	---	---	---
95:												
Axis------------	0-6	Mucky sandy clay loam	CL-ML, SC, SC-SM	A-4	0	0	100	100	70-85	40-60	16-28	4-10
	6-40	Sandy loam, loam, silt loam	CL, CL-ML, SC, SC-SM	A-4	0	0	100	100	75-95	45-75	16-28	4-10
	40-80	Sandy loam, loam, sandy clay loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	75-95	45-65	0-25	NP-7
96:												
Handsboro-------	0-4	Mucky silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	90-100	0-20	NP-4
	4-26	Muck	PT	---	0	0	---	---	---	---	---	---
	26-62	Stratified muck to sandy loam	PT	---	0	0	---	---	---	---	---	---
97:												
Maurepas--------	0-54	Muck	PT	A-8	0	0	---	---	---	---	---	---
226:												
Bayou-----------	0-7	Sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	70-95	30-60	0-25	NP-7
	7-40	Sandy loam, loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	100	100	70-95	35-65	0-25	NP-7
	40-80	Sandy clay loam, clay loam	CL, SC	A-6, A-4	0	0	95-100	95-100	80-100	45-75	25-38	8-15

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				*Pct*	*Pct*					*Pct*	
328:												
Harleston-------	0-6	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-4, A-2	0	0	90-100	85-100	60-85	30-55	0-25	NP-7
	6-42	Sandy loam, loam	SC, CL, CL-ML, SC-SM	A-2, A-4	0	0	90-100	85-100	60-95	30-70	20-30	5-10
	42-62	Sandy loam, loam, sandy clay loam	CL-ML, CL, SC-SM, SC	A-2, A-4, A-6	0	0	90-100	85-100	60-95	30-70	20-35	5-13
329:												
Harleston-------	0-6	Fine sandy loam	SM, CL-ML, SC-SM, ML	A-2, A-4	0	0	90-100	85-100	60-85	30-55	0-25	NP-7
	6-42	Sandy loam, loam	SC-SM, SC, CL-ML, CL	A-2, A-4	0	0	90-100	85-100	60-95	30-70	20-30	5-10
	42-62	Sandy loam, loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0	0	90-100	85-100	60-95	30-70	20-35	5-13
330:												
Harleston-------	0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4, A-2	0	0	90-100	85-100	60-85	30-55	0-25	NP-7
	6-42	Sandy loam, loam	CL-ML, CL, SC-SM, SC	A-4, A-2	0	0	90-100	85-100	60-95	30-70	20-30	5-10
	42-62	Sandy loam, loam, sandy clay loam	SC, CL-ML, CL, SC-SM	A-6, A-2, A-4	0	0	90-100	85-100	60-95	30-70	20-35	5-13
365:												
Duckston--------	0-13	Sand	SP, SP-SM	A-2, A-3	0	0	100	95-100	60-75	3-12	10-15	NP
	13-70	Sand, fine sand	SP-SM, SP	A-3, A-2	0	0	100	95-100	60-75	3-12	10-15	NP
386:												
Newhan----------	0-2	Fine sand		A-2, A-3	0	0	100	95-100	60-75	3-12	0-10	NP
	2-80	Sand, fine sand	SP-SM, SP	A-2, A-3	0	0	95-100	95-100	60-75	0-5	0-14	NP
Corolla---------	0-5	Fine sand	SP, SP-SM	A-2, A-3	0	0	100	95-100	60-75	0-5	0-14	NP
	5-80	Sand, fine sand	SW, SP, SP-SM	A-3, A-2	0	0	100	95-100	60-95	1-12	0-14	NP
387:												
Beaches---------	0-80	Sand	SP	A-3, A-1	0	0	100	75-100	5-85	0-5	0-14	NP

Table 15.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				*Pct*	*Pct*					*Pct*	
388:												
Latonia---------	0-6	Loamy sand	SM	A-2-4	0	0	90-100	85-100	50-80	15-35	0-14	NP
	6-44	Sandy loam, loam, fine sandy loam	SM	A-2-4, A-4	0	0	90-100	85-100	60-85	30-50	0-14	NP
	44-80	Sand, loamy sand	SP-SM, SM	A-2-4	0	0	90-100	85-100	50-75	10-30	0-14	NP
528:												
Columbus--------	0-6	Loam	ML, CL, CL-ML	A-4	0	0	100	100	90-100	70-90	0-30	3-10
	6-52	Clay loam, loam, sandy clay loam	CL, SC	A-4, A-6	0	0	100	90-100	80-95	40-80	22-35	8-15
	52-82	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-4	0	0	100	90-100	50-85	10-45	0-20	NP-4

Table 16.--Physical Properties of the Soils

[Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
								Kw	Kf	T		
	In	*Pct*	*g/cc*	*um/sec*	*In/in*	*Pct*	*Pct*					
2:												
Kinston--------------	0-6	5-18	1.40-1.60	14.11-42.34	0.13-0.19	0.0-2.9	1.0-5.0	.24	.24	5	3	86
	6-56	18-35	1.30-1.50	4.23-14.11	0.14-0.18	0.0-2.9	0.2-3.0	.32	.32			
	56-86	---	---	---	---	---	---	---	---			
Chastain-------------	0-2	27-40	1.20-1.40	1.41-4.23	0.12-0.18	3.0-5.9	1.0-6.0	.32	.32	4	4	86
	2-55	35-60	1.30-1.50	0.42-1.41	0.12-0.16	3.0-5.9	1.0-3.0	.37	.37			
	55-74	2-10	1.50-1.70	42.34-141.14	0.03-0.06	0.0-2.9	1.0-3.0	.10	.10			
Mantachie------------	0-9	8-20	1.50-1.60	4.23-14.11	0.16-0.20	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	9-70	18-34	1.50-1.60	4.23-14.11	0.14-0.20	0.0-2.9	0.2-3.0	.28	.28			
3:												
Atmore---------------	0-4	2-12	1.35-1.60	4.23-14.11	0.16-0.24	0.0-2.9	0.5-3.0	.37	.37	4	5	48
	4-35	6-18	1.35-1.60	4.23-14.11	0.16-0.24	0.0-2.9	0.2-1.5	.37	.37			
	35-81	15-40	1.45-1.65	1.41-4.23	0.18-0.22	0.0-2.9	0.1-0.5	.32	.32			
4:												
Lenoir---------------	0-13	6-20	1.30-1.50	4.23-14.11	0.14-0.18	0.0-2.9	1.0-4.0	.37	.37	5	5	48
	13-62	35-60	1.20-1.35	0.42-1.41	0.13-0.15	3.0-5.9	0.1-1.0	.32	.32			
	62-84	10-20	1.40-1.65	4.00-14.00	0.12-0.18	0.0-3.0	0.1-0.5	.20	.20			
5:												
Benndale-------------	0-6	6-14	1.45-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	44-74	14-28	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.32	.32			
	74-81	6-20	1.55-1.65	14.00-42.34	0.10-0.15	0.0-2.9	0.1-0.3	.28	.28			
6:												
Benndale-------------	0-6	6-14	1.45-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	44-74	14-28	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	74-81	6-20	1.55-1.65	14.00-42.34	0.10-0.15	0.0-2.9	0.1-0.3	.28	.28			
8:												
Latonia--------------	0-6	3-12	1.40-1.50	42.34-141.14	0.05-0.10	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	6-44	10-16	1.40-1.50	14.11-42.34	0.10-0.15	0.0-2.9	0.1-0.3	.20	.20			
	44-80	3-10	1.40-1.50	42.34-141.14	0.05-0.10	0.0-2.9	0.1-0.3	.15	.15			
12:												
Arat-----------------	0-12	5-25	0.25-1.00	4.23-14.11	0.20-0.30	0.0-2.9	15-30	.43	.43	5	8	0
	12-84	10-32	0.25-1.00	4.23-14.11	0.18-0.23	0.0-2.9	5.0-30	.43	.43			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
13:												
Daleville------------	0-8	10-20	1.40-1.50	4.23-14.11	0.18-0.20	0.0-2.9	0.5-3.0	.32	.32	5	5	48
	8-62	20-35	1.40-1.50	0.42-4.23	0.16-0.20	3.0-5.9	0.1-1.0	.37	.37			
14:												
Daleville------------	0-8	10-20	1.40-1.50	4.23-14.11	0.18-0.20	0.0-2.9	0.5-3.0	.37	.37	5	5	48
	8-80	20-35	1.40-1.50	0.42-4.23	0.16-0.20	3.0-5.9	0.1-1.0	.37	.37			
16:												
Eustis---------------	0-5	2-10	1.35-1.60	42.00-141.14	0.08-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	5-30	2-10	1.40-1.60	42.00-141.14	0.05-0.08	0.0-2.9	0.1-0.5	.17	.17			
	30-70	6-14	1.40-1.60	42.00-141.14	0.07-0.11	0.0-2.9	0.1-0.3	.17	.17			
	70-82	2-7	1.45-1.60	42.00-141.14	0.05-0.07	0.0-2.9	0.1-0.3	.17	.17			
17:												
Eustis---------------	0-5	2-10	1.35-1.60	42.00-141.14	0.08-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	5-30	2-10	1.40-1.60	42.00-141.14	0.05-0.08	0.0-2.9	0.1-0.5	.17	.17			
	30-70	6-14	1.40-1.60	42.00-141.14	0.07-0.11	0.0-2.9	0.1-0.3	.17	.17			
	70-82	2-7	1.45-1.60	42.00-141.14	0.05-0.07	0.0-2.9	0.1-0.3	.17	.17			
18:												
Eustis---------------	0-5	2-10	1.35-1.60	42.00-141.14	0.08-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	5-30	2-10	1.40-1.60	42.00-141.14	0.05-0.08	0.0-2.9	0.1-0.5	.17	.17			
	30-70	6-14	1.40-1.60	42.00-141.14	0.07-0.11	0.0-2.9	0.1-0.3	.17	.17			
	70-82	2-7	1.45-1.60	42.00-141.14	0.05-0.07	0.0-2.9	0.1-0.3	.17	.17			
21:												
Bigbee---------------	0-5	4-10	1.40-1.50	42.34-141.14	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	5-41	2-10	1.40-1.50	42.34-141.14	0.05-0.08	0.0-2.9	0.1-0.5	.10	.10			
	41-93	1-10	1.40-1.50	42.34-141.14	0.05-0.08	0.0-2.9	0.1-0.3	.10	.10			
22:												
Myatt----------------	0-9	10-25	1.30-1.60	4.23-14.11	0.16-0.24	0.0-2.9	0.5-4.0	.28	.28	4	5	48
	9-50	18-35	1.30-1.50	1.41-14.11	0.12-0.20	0.0-2.9	0.1-1.5	.28	.28			
	50-84	7-30	1.30-1.50	1.41-14.11	0.10-0.20	0.0-2.9	0.1-0.3	.24	.24			
24:												
Hyde-----------------	0-14	5-18	1.30-1.50	4.23-14.11	0.13-0.20	0.0-2.9	3.0-10	.43	.43	5	5	48
	14-56	18-35	1.30-1.40	1.41-4.23	0.15-0.20	0.0-2.9	1.0-3.0	.37	.37			
	56-80	---	---	---	---	---	1.0-3.0	---	---			
25:												
Quitman--------------	0-11	5-15	1.35-1.65	4.23-14.11	0.15-0.24	0.0-2.9	0.5-3.0	.28	.28	5	5	48
	11-22	18-35	1.45-1.70	4.23-14.11	0.12-0.17	0.0-2.9	0.2-1.0	.32	.32			
	22-65	18-35	1.45-1.70	1.41-4.23	0.11-0.17	0.0-2.9	0.1-0.5	.32	.32			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	*Pct*	*g/cc*	*um/sec*	*In/in*	*Pct*	*Pct*					
26:												
Smithton-------------	0-3	5-18	1.40-1.55	4.23-14.11	0.13-0.20	0.0-2.9	0.5-3.0	.28	.28	5	5	48
	3-38	5-18	1.40-1.55	4.23-14.11	0.10-0.20	0.0-2.9	0.5-2.0	.28	.28			
	38-82	8-30	1.35-1.55	1.41-4.23	0.11-0.20	0.0-2.9	0.1-0.5	.28	.28			
27:												
Johns----------------	0-7	4-12	1.60-1.75	14.11-42.34	0.06-0.11	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	7-34	18-35	1.40-1.60	4.23-14.11	0.12-0.15	0.0-2.9	0.1-1.0	.24	.24			
	34-82	2-10	1.60-1.70	42.34-141.14	0.03-0.06	0.0-2.9	0.1-0.3	.10	.10			
28:												
Vancleave------------	0-11	2-12	1.30-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.15	.15	4	2	134
	11-22	10-18	1.35-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	22-51	10-30	1.50-1.75	0.42-1.41	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	51-90	20-40	1.30-1.60	1.41-4.23	0.13-0.19	0.0-2.9	0.1-0.3	.24	.24			
29:												
Vancleave------------	0-11	2-12	1.30-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.15	.15	4	2	134
	11-22	10-18	1.35-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	22-51	10-30	1.50-1.75	0.42-1.41	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	51-90	20-40	1.30-1.60	1.41-4.23	0.13-0.19	0.0-2.9	0.1-0.3	.24	.24			
30:												
Vancleave------------	0-11	2-12	1.30-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.15	.15	4	2	134
	11-22	10-18	1.35-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	22-51	10-30	1.50-1.75	0.42-1.41	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	51-90	20-40	1.30-1.60	1.41-4.23	0.13-0.19	0.0-2.9	0.1-0.3	.24	.24			
32:												
Escambia-------------	0-4	5-14	1.35-1.55	14.11-42.34	0.11-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	4-44	8-18	1.35-1.55	4.23-14.11	0.15-0.20	0.0-2.9	0.1-1.0	.28	.28			
	44-85	8-35	1.45-1.65	0.42-4.23	0.10-0.18	0.0-2.9	0.1-0.3	.28	.28			
33:												
Escambia-------------	0-4	5-14	1.35-1.55	14.11-42.34	0.11-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	4-44	8-18	1.35-1.55	4.23-14.11	0.15-0.20	0.0-2.9	0.1-1.0	.28	.28			
	44-85	8-35	1.45-1.65	0.42-4.23	0.10-0.18	0.0-2.9	0.1-0.3	.28	.28			
36:												
Smithdale------------	0-13	2-18	1.40-1.50	14.11-42.34	0.10-0.18	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	13-42	18-33	1.40-1.55	4.23-14.11	0.15-0.17	0.0-2.9	0.1-1.0	.24	.24			
	42-64	12-27	1.40-1.55	14.00-42.34	0.14-0.16	0.0-2.9	0.1-0.3	.28	.28			
Boykin---------------	0-22	3-10	1.40-1.60	42.00-141.00	0.05-0.09	0.0-2.9	0.5-1.5	.10	.10	5	2	134
	22-80	15-35	1.40-1.60	4.00-14.00	0.05-0.09	0.0-2.9	0.1-0.3	.20	.20			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								Kw	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
44:												
Malbis----------------	0-8	10-25	1.30-1.60	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	8-27	18-33	1.30-1.70	4.23-14.11	0.12-0.20	0.0-2.9	0.1-1.0	.28	.28			
	27-61	20-35	1.40-1.60	4.23-14.11	0.12-0.17	0.0-2.9	0.1-0.5	.28	.28			
	61-80	20-35	1.45-1.70	1.41-4.23	0.06-0.12	0.0-2.9	0.1-0.3	.28	.28			
45:												
Malbis----------------	0-8	10-25	1.30-1.60	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	8-27	18-33	1.30-1.70	4.23-14.11	0.12-0.20	0.0-2.9	0.1-1.0	.28	.28			
	27-61	20-35	1.40-1.60	4.23-14.11	0.12-0.17	0.0-2.9	0.1-0.5	.28	.28			
	61-80	20-35	1.45-1.70	1.41-4.23	0.06-0.12	0.0-2.9	0.1-0.3	.28	.28			
48:												
Suffolk---------------	0-6	4-10	1.40-1.50	14.11-141.14	0.05-0.10	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	6-37	10-33	1.40-1.50	4.23-14.00	0.10-0.15	0.0-2.9	0.1-0.5	.24	.24			
	37-86	4-10	1.40-1.50	14.00-141.14	0.04-0.10	0.0-2.9	0.1-0.5	.15	.15			
50:												
Ruston----------------	0-11	2-20	1.30-1.70	4.23-14.11	0.09-0.16	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	11-30	18-35	1.40-1.70	4.23-14.11	0.12-0.17	0.0-2.9	0.1-0.5	.28	.28			
	30-36	10-30	1.30-1.70	14.00-42.00	0.12-0.15	0.0-2.9	0.1-0.5	.28	.28			
	36-84	15-38	1.40-1.70	14.00-42.00	0.12-0.17	0.0-2.9	0.1-0.3	.28	.28			
51:												
Bama------------------	0-10	7-22	1.30-1.60	4.23-42.34	0.08-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	10-48	18-32	1.40-1.55	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	48-84	20-35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
52:												
Bama------------------	0-10	7-22	1.30-1.60	4.23-42.34	0.08-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	10-48	18-32	1.40-1.55	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	48-84	20-35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
53:												
Bama------------------	0-10	7-22	1.30-1.60	4.23-42.34	0.08-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	10-48	18-32	1.40-1.55	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	48-84	20-35	1.40-1.60	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
55:												
Ocilla----------------	0-27	4-10	1.45-1.65	14.11-141.14	0.05-0.08	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	27-86	15-40	1.55-1.70	4.00-14.11	0.09-0.12	0.0-2.9	0.1-0.5	.24	.24			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
56:												
Benndale	0-6	6-14	1.45-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	44-74	14-28	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	74-81	6-20	1.55-1.65	14.00-42.34	0.10-0.15	0.0-2.9	0.1-0.3	.28	.28			
57:												
Poarch	0-10	5-15	1.35-1.55	14.11-42.34	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	10-73	8-18	1.35-1.55	4.23-14.11	0.10-0.20	0.0-2.9	0.1-0.5	.24	.24			
	73-81	10-25	1.45-1.65	1.41-4.23	0.10-0.20	0.0-2.9	0.1-0.3	.24	.24			
58:												
Benndale	0-6	6-14	1.45-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	6-44	10-18	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.5	.28	.28			
	44-74	14-28	1.55-1.65	4.23-14.11	0.12-0.18	0.0-2.9	0.1-0.3	.28	.28			
	74-81	6-20	1.55-1.65	14.00-42.34	0.10-0.15	0.0-2.9	0.1-0.3	.28	.28			
62:												
Prentiss	0-5	5-18	1.50-1.60	4.23-14.11	0.12-0.16	0.0-2.9	0.5-2.0	.37	.37	4	5	48
	5-23	5-18	0.80-1.50	4.23-14.11	0.12-0.16	0.0-2.9	0.1-0.5	.37	.37			
	23-80	10-20	1.65-1.75	1.41-4.23	0.06-0.09	0.0-2.9	0.1-0.3	.24	.24			
63:												
Stough	0-5	7-15	1.45-1.55	4.23-14.11	0.12-0.18	0.0-2.9	0.5-3.0	.37	.37	4	5	48
	5-12	8-18	1.45-1.50	1.41-4.23	0.07-0.11	0.0-2.9	0.5-1.0	.28	.28			
	12-69	5-27	1.55-1.65	1.41-4.23	0.07-0.11	0.0-2.9	0.1-0.5	.28	.28			
66:												
Freest	0-6	3-10	1.40-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-23	10-35	1.40-1.50	1.41-4.23	0.15-0.18	3.0-5.9	0.1-1.0	.28	.28			
	23-88	27-50	1.40-1.55	0.42-1.41	0.15-0.18	6.0-8.9	0.1-0.5	.28	.28			
68:												
Saucier	0-5	8-18	1.50-1.55	14.11-42.34	0.12-0.15	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	5-27	18-35	1.55-1.60	4.23-14.11	0.16-0.19	0.0-2.9	0.1-1.0	.32	.37			
	27-39	18-35	1.55-1.60	0.42-1.41	0.16-0.20	0.0-2.9	0.1-0.5	.32	.37			
	39-70	35-50	1.35-1.45	0.42-1.41	0.16-0.20	3.0-5.9	0.1-0.3	.32	.32			
76:												
Nugent	0-6	2-8	1.20-1.40	42.34-141.14	0.07-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	6-60	2-10	1.20-1.40	14.11-42.34	0.07-0.13	0.0-2.9	0.1-1.0	.17	.20			
Jena	0-6	10-20	1.30-1.70	4.23-14.11	0.12-0.20	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-46	10-18	1.30-1.70	4.23-14.11	0.10-0.20	0.0-2.9	0.1-1.0	.28	.28			
	46-65	2-20	1.35-1.65	14.00-42.34	0.08-0.14	0.0-2.9	0.1-0.5	.24	.24			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	*Pct*	*g/cc*	*um/sec*	*In/in*	*Pct*	*Pct*					
78:												
Susquehanna----------	0-5	2-12	1.50-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	48
	5-80	35-60	1.25-1.50	0.00-0.42	0.15-0.20	6.0-8.9	0.1-0.5	.32	.32			
Freest---------------	0-6	3-10	1.40-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-23	10-35	1.40-1.50	1.41-4.23	0.15-0.18	3.0-5.9	0.1-1.0	.28	.28			
	23-88	27-50	1.40-1.55	0.42-1.41	0.15-0.18	6.0-8.9	0.1-0.5	.28	.28			
79:												
Susquehanna----------	0-5	2-12	1.50-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	48
	5-80	35-60	1.25-1.50	0.00-0.42	0.15-0.20	6.0-8.9	0.1-0.5	.32	.32			
Freest---------------	0-6	3-10	1.40-1.50	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	6-23	10-35	1.40-1.50	1.41-4.23	0.15-0.18	3.0-5.9	0.1-1.0	.28	.28			
	23-88	27-50	1.40-1.55	0.42-1.41	0.15-0.18	6.0-8.9	0.1-0.5	.28	.28			
80:												
Susquehanna----------	0-5	2-12	1.50-1.55	4.23-14.11	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	5	48
	5-80	35-60	1.25-1.50	0.00-0.42	0.15-0.20	6.0-8.9	0.1-0.5	.32	.32			
84:												
Wadley---------------	0-72	4-10	1.35-1.65	42.34-141.14	0.07-0.12	0.0-2.9	0.1-1.0	.10	.10	5	2	134
	72-100	13-35	1.55-1.65	4.23-14.11	0.10-0.13	0.0-2.9	0.1-0.3	.20	.20			
85:												
Leon-----------------	0-6	2-8	1.15-1.30	42.00-141.00	0.15-0.20	0.0-2.9	10-20	.10	.10	5	8	0
	6-13	0-3	1.40-1.65	42.00-141.00	0.02-0.05	0.0-2.9	0.1-0.5	.10	.10			
	13-38	2-8	1.50-1.70	4.00-42.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.15			
	38-62	1-3	1.40-1.65	42.00-141.00	0.02-0.10	0.0-2.9	0.1-0.5	.10	.10			
88:												
Croatan--------------	0-16	0-0	0.40-0.65	0.42-42.34	0.35-0.45	0.0-2.9	25-60	---	---	2	8	0
	16-50	8-20	1.40-1.60	1.41-42.34	0.10-0.15	0.0-2.9	2.0-15	.17	.17			
	50-66	10-35	1.40-1.60	1.41-14.11	0.12-0.20	0.0-2.9	0.5-5.0	.24	.24			
	66-85	10-35	1.40-1.60	1.41-14.11	0.12-0.20	0.0-2.9	0.5-5.0	.24	.24			
Johnston-------------	0-26	7-18	1.25-1.45	14.11-42.34	0.20-0.26	0.0-2.9	8.0-15	.17	.17	5	8	0
	26-48	5-20	1.45-1.65	42.34-141.14	0.06-0.12	0.0-2.9	0.5-3.0	.17	.17			
	48-68	2-12	1.55-1.65	42.34-141.14	0.02-0.07	0.0-2.9	0.5-3.0	.17	.17			
89:												
Udorthents-----------	0-80	---	---	---	---	---	---	---	---	---	---	---
90:												
Pits-----------------	0-80	---	---	---	---	---	---	---	---	---	---	---

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	*Pct*	*g/cc*	*um/sec*	*In/in*	*Pct*	*Pct*					
95:												
Axis-----------------	0-6	15-25	1.15-1.35	4.23-14.11	0.08-0.15	0.0-2.9	8.0-12	.24	.24	5	8	0
	6-40	8-15	1.30-1.50	4.23-14.11	0.08-0.15	0.0-2.9	1.0-5.0	.20	.20			
	40-80	8-25	1.30-1.60	4.23-14.11	0.08-0.15	0.0-2.9	1.0-5.0	.20	.20			
96:												
Handsboro------------	0-4	2-30	0.75-1.40	4.23-14.11	0.20-0.30	0.0-2.9	10-20	.43	.43	3	8	0
	4-26	0-0	0.75-1.40	42.34-141.14	0.20-0.50	0.0-2.9	10-20	---	---			
	26-62	0-0	0.75-1.40	42.34-141.14	0.20-0.50	0.0-2.9	3.0-20	---	---			
97:												
Maurepas-------------	0-54	0-0	0.05-0.25	42.34-141.14	0.20-0.50	0.0-2.9	25-60	---	---	3	8	0
226:												
Bayou----------------	0-7	5-15	1.35-1.60	4.00-14.00	0.11-0.17	0.0-2.9	0.5-2.0	.20	.20	5	3	86
	7-40	7-18	1.35-1.60	4.00-14.00	0.11-0.17	0.0-2.9	0.2-1.0	.20	.20			
	40-80	20-30	1.45-1.65	1.40-4.00	0.12-0.20	0.0-2.9	0.1-0.5	.32	.32			
328:												
Harleston------------	0-6	2-8	1.25-1.35	4.23-42.34	0.08-0.16	0.0-2.9	0.5-3.0	.20	.20	5	3	86
	6-42	8-18	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.5	.28	.28			
	42-62	8-27	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.3	.28	.28			
329:												
Harleston------------	0-6	2-8	1.25-1.35	4.23-42.34	0.08-0.16	0.0-2.9	0.5-3.0	.20	.20	5	3	86
	6-42	8-18	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.5	.28	.28			
	42-62	8-27	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.3	.28	.28			
330:												
Harleston------------	0-6	2-8	1.25-1.35	4.23-42.34	0.08-0.16	0.0-2.9	0.5-3.0	.20	.20	5	3	86
	6-42	8-18	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.5	.28	.28			
	42-62	8-27	1.55-1.65	4.23-14.11	0.13-0.16	0.0-2.9	0.1-0.3	.28	.28			
365:												
Duckston-------------	0-13	0-4	1.60-1.70	141.14-300.0	0.02-0.08	0.0-2.9	0.5-3.0	.10	.10	5	1	180
	13-70	0-4	1.60-1.70	141.14-300.0	0.02-0.05	0.0-2.9	0.1-1.0	.10	.10			
386:												
Newhan---------------	0-2	2-6	1.60-1.75	141.14-300.0	0.02-0.10	0.0-2.9	0.1-1.5	.10	.10	5	1	180
	2-80	1-5	1.60-1.75	141.14-300.0	0.01-0.05	0.0-2.9	0.1-0.3	.10	.10			
Corolla--------------	0-5	1-6	1.60-1.70	141.14-300.0	0.01-0.08	0.0-2.9	0.2-1.5	.10	.10	5	1	180
	5-80	0-3	1.60-1.70	141.14-300.0	0.01-0.03	0.0-2.9	0.1-0.5	.10	.10			

Table 16.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	*Pct*	*g/cc*	*um/sec*	*In/in*	*Pct*	*Pct*					
387:												
Beaches--------------	0-80	0-1	1.35-1.85	42.34-141.14	0.03-0.05	0.0-2.9	0.1-0.5	.05	.05	5	1	180
388:												
Latonia--------------	0-6	3-12	1.40-1.50	42.34-141.14	0.05-0.10	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	6-44	10-16	1.40-1.50	14.11-42.34	0.10-0.15	0.0-2.9	0.1-0.5	.20	.20			
	44-80	3-10	1.40-1.50	42.34-141.14	0.05-0.10	0.0-2.9	0.1-0.3	.15	.15			
528:												
Columbus-------------	0-6	10-16	1.50-1.55	4.23-14.11	0.20-0.22	0.0-2.9	0.5-3.0	.37	.37	5	5	48
	6-52	18-33	1.55-1.60	4.23-14.11	0.12-0.15	0.0-2.9	0.1-0.5	.28	.28			
	52-82	6-12	1.35-1.40	14.00-141.14	0.05-0.10	0.0-2.9	0.1-0.3	.17	.17			

Table 17.--Chemical Properties of the Soils

[Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorption ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
2:						
Kinston--------------	0-6	---	1.0-5.0	4.5-6.0	0	0
	6-56	---	3.0-10	4.5-5.5	0	0
	56-86	---	---	4.5-5.5	0	0
Chastain-------------	0-2	---	4.0-8.0	3.5-6.0	0	0
	2-55	---	5.0-12	3.5-6.0	0	0
	55-74	---	0.1-3.0	3.5-6.0	0	0
Mantachie------------	0-9	---	1.0-7.0	4.5-5.5	0	0
	9-70	---	4.0-12	4.5-5.5	0	0
3:						
Atmore---------------	0-4	---	0.1-4.0	3.6-5.5	0	0
	4-35	---	1.0-5.0	3.6-5.5	0	0
	35-81	---	1.0-10	3.6-5.5	0	0
4:						
Lenoir---------------	0-13	---	1.0-5.0	3.5-5.5	0	0
	13-62	---	5.0-13	3.5-5.5	0	0
	62-84	---	1.0-5.0	3.5-5.5	0	0
5:						
Benndale-------------	0-6	---	1.0-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-74	---	1.0-6.0	4.5-5.5	0	0
	74-81	---	1.0-5.0	4.5-5.5	0	0
6:						
Benndale-------------	0-6	---	1.0-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-74	---	1.0-6.0	4.5-5.5	0	0
	74-81	---	1.0-5.0	4.5-5.5	0	0
8:						
Latonia--------------	0-6	---	0.5-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-80	---	0.5-2.0	4.5-5.5	0	0
12:						
Arat-----------------	0-12	30-60	---	5.1-6.5	0.0-2.0	0
	12-84	10-30	---	5.1-7.3	0.0-2.0	0
13:						
Daleville------------	0-8	---	2.0-7.0	4.5-6.5	0	0
	8-62	---	5.0-15	4.5-5.5	0	0
14:						
Daleville------------	0-8	---	2.0-7.0	4.5-6.5	0	0
	8-80	---	5.0-15	4.5-5.5	0	0
16:						
Eustis---------------	0-5	---	0.1-3.0	4.5-5.5	0	0
	5-30	---	0.1-2.0	4.5-5.5	0	0
	30-70	---	0.5-3.0	4.5-5.5	0	0
	70-82	---	0.1-2.0	4.5-5.5	0	0

Table 17.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorption ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
17:						
Eustis---------------	0-5	---	0.1-3.0	4.5-5.5	0	0
	5-30	---	0.1-2.0	4.5-5.5	0	0
	30-70	---	0.5-3.0	4.5-5.5	0	0
	70-82	---	0.1-2.0	4.5-5.5	0	0
18:						
Eustis---------------	0-5	---	0.1-3.0	4.5-5.5	0	0
	5-30	---	0.1-2.0	4.5-5.5	0	0
	30-70	---	0.5-3.0	4.5-5.5	0	0
	70-82	---	0.1-2.0	4.5-5.5	0	0
21:						
Bigbee---------------	0-5	---	0.5-5.0	4.5-6.0	0	0
	5-41	---	0.1-3.0	4.5-6.0	0	0
	41-93	---	0.1-3.0	4.5-6.0	0	0
22:						
Myatt----------------	0-9	---	2.0-9.0	4.5-6.0	0	0
	9-50	---	5.0-15	3.6-5.5	0	0
	50-84	---	2.0-12	3.6-5.5	0	0
24:						
Hyde-----------------	0-14	---	1.0-7.0	3.5-5.5	0	0
	14-56	---	4.0-12	3.5-5.5	0	0
	56-80	---	---	3.5-5.5	0	0
25:						
Quitman--------------	0-11	---	0.5-4.0	4.5-5.5	0	0
	11-22	---	3.0-8.0	4.5-5.5	0	0
	22-65	---	3.0-8.0	4.5-5.5	0	0
26:						
Smithton-------------	0-3	---	0.5-4.0	4.5-5.5	0	0
	3-38	---	0.5-4.0	4.5-5.5	0	0
	38-82	---	1.0-6.0	4.5-5.5	0	0
27:						
Johns----------------	0-7	---	0.5-4.0	4.5-5.5	0	0
	7-34	---	3.0-8.0	4.5-5.5	0	0
	34-82	---	0.1-3.0	4.5-5.5	0	0
28:						
Vancleave------------	0-11	---	0.1-4.0	4.5-6.5	0	0
	11-22	---	2.0-4.0	4.5-5.5	0	0
	22-51	---	2.0-8.0	4.5-5.5	0	0
	51-90	---	4.0-10	4.5-5.5	0	0
29:						
Vancleave------------	0-11	---	0.1-4.0	4.5-6.5	0	0
	11-22	---	2.0-4.0	4.5-5.5	0	0
	22-51	---	2.0-8.0	4.5-5.5	0	0
	51-90	---	4.0-10	4.5-5.5	0	0
30:						
Vancleave------------	0-11	---	0.1-4.0	4.5-6.5	0	0
	11-22	---	2.0-4.0	4.5-5.5	0	0
	22-51	---	2.0-8.0	4.5-5.5	0	0
	51-90	---	4.0-10	4.5-5.5	0	0

Table 17.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorp- tion ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
32:						
Escambia-------------	0-4	---	0.5-4.0	3.6-5.5	0	0
	4-44	---	1.0-5.0	3.6-5.5	0	0
	44-85	---	1.0-8.0	3.6-5.5	0	0
33:						
Escambia-------------	0-4	---	0.5-4.0	3.6-5.5	0	0
	4-44	---	1.0-5.0	3.6-5.5	0	0
	44-85	---	1.0-8.0	3.6-5.5	0	0
36:						
Smithdale------------	0-13	---	0.1-4.0	4.5-5.5	0	0
	13-42	---	2.0-8.0	4.5-5.5	0	0
	42-64	---	1.0-5.0	4.5-5.5	0	0
Boykin---------------	0-22	---	0.1-4.0	4.5-6.5	0	0
	22-80	---	2.0-8.0	4.5-6.5	0	0
44:						
Malbis---------------	0-8	---	1.0-4.0	4.5-6.0	0	0
	8-27	---	2.0-8.0	4.5-5.5	0	0
	27-61	---	2.0-8.0	4.5-5.5	0	0
	61-80	---	2.0-8.0	4.5-5.5	0	0
45:						
Malbis---------------	0-8	---	1.0-4.0	4.5-6.0	0	0
	8-27	---	2.0-8.0	4.5-5.5	0	0
	27-61	---	2.0-8.0	4.5-5.5	0	0
	61-80	---	2.0-8.0	4.5-5.5	0	0
48:						
Suffolk--------------	0-6	---	0.1-4.0	3.6-6.0	0	0
	6-37	---	2.0-8.0	3.6-6.0	0	0
	37-86	---	0.5-4.0	3.6-6.0	0	0
50:						
Ruston---------------	0-11	---	0.5-4.0	4.5-6.5	0	0
	11-30	---	2.0-8.0	4.5-6.0	0	0
	30-36	---	2.0-6.0	4.5-6.0	0	0
	36-84	---	2.0-8.0	4.5-6.0	0	0
51:						
Bama-----------------	0-10	---	0.5-4.0	4.5-6.0	0	0
	10-48	---	2.0-8.0	4.5-5.5	0	0
	48-84	---	2.0-8.0	4.5-5.5	0	0
52:						
Bama-----------------	0-10	---	0.5-4.0	4.5-6.0	0	0
	10-48	---	2.0-8.0	4.5-5.5	0	0
	48-84	---	2.0-8.0	4.5-5.5	0	0
53:						
Bama-----------------	0-10	---	0.5-4.0	4.5-6.0	0	0
	10-48	---	2.0-8.0	4.5-5.5	0	0
	48-84	---	2.0-8.0	4.5-5.5	0	0
55:						
Ocilla---------------	0-27	---	0.1-2.0	4.5-5.5	0	0
	27-86	---	2.0-8.0	4.5-5.5	0	0

Table 17.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorption ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
56:						
Benndale-------------	0-6	---	1.0-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-74	---	1.0-6.0	4.5-5.5	0	0
	74-81	---	1.0-5.0	4.5-5.5	0	0
57:						
Poarch---------------	0-10	---	0.5-3.0	4.5-5.5	0	0
	10-73	---	1.0-5.0	4.5-5.5	0	0
	73-81	---	1.0-6.0	4.5-5.5	0	0
58:						
Benndale-------------	0-6	---	1.0-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-74	---	1.0-6.0	4.5-5.5	0	0
	74-81	---	1.0-5.0	4.5-5.5	0	0
62:						
Prentiss-------------	0-5	---	0.5-4.0	4.5-5.5	0	0
	5-23	---	0.5-4.0	4.5-5.5	0	0
	23-80	---	1.0-5.0	4.5-5.5	0	0
63:						
Stough---------------	0-5	---	0.5-4.0	4.5-5.5	0	0
	5-12	---	1.0-4.0	4.5-5.5	0	0
	12-69	---	0.5-6.0	4.5-5.5	0	0
66:						
Freest---------------	0-6	---	0.5-4.0	4.5-5.5	0	0
	6-23	---	2.0-15	4.5-6.0	0	0
	23-88	---	5.0-25	4.5-7.3	0	0
68:						
Saucier--------------	0-5	---	1.0-4.0	4.5-5.5	0	0
	5-27	---	2.0-8.0	4.5-5.5	0	0
	27-39	---	2.0-8.0	4.5-5.5	0	0
	39-70	---	2.0-8.0	4.5-5.5	0	0
76:						
Nugent---------------	0-6	---	0.5-4.0	4.5-6.5	0	0
	6-60	---	0.1-4.0	4.5-6.5	0	0
Jena-----------------	0-6	---	0.5-4.0	4.5-6.0	0	0
	6-46	---	1.0-6.0	4.5-5.5	0	0
	46-65	---	0.1-4.0	4.5-5.5	0	0
78:						
Susquehanna----------	0-5	---	1.0-8.0	4.5-5.5	0	0
	5-80	---	15-35	4.5-5.5	0	0
Freest---------------	0-6	---	0.5-4.0	4.5-5.5	0	0
	6-23	---	2.0-15	4.5-6.0	0	0
	23-88	---	5.0-25	4.5-7.3	0	0
79:						
Susquehanna----------	0-5	---	1.0-8.0	4.5-5.5	0	0
	5-80	---	15-35	4.5-5.5	0	0
Freest---------------	0-6	---	0.5-4.0	4.5-5.5	0	0
	6-23	---	2.0-15	4.5-6.0	0	0
	23-88	---	5.0-25	4.5-7.3	0	0

Table 17.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorption ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
80:						
Susquehanna----------	0-5	---	1.0-8.0	4.5-5.5	0	0
	5-80	---	15-35	4.5-5.5	0	0
84:						
Wadley---------------	0-72	---	0.1-3.0	4.5-6.0	0.0-2.0	0
	72-100	---	1.0-6.0	4.5-6.0	0.0-2.0	0
85:						
Leon-----------------	0-6	---	25-60	3.6-5.5	0.0-2.0	0
	6-13	---	0.1-3.0	3.6-5.5	0.0-2.0	0
	13-38	---	0.5-5.0	3.6-5.5	0.0-2.0	0
	38-62	---	0.1-3.0	3.6-5.5	0.0-2.0	0
88:						
Croatan--------------	0-16	---	25-60	2.0-4.4	0	0
	16-50	---	4.0-19	3.5-6.5	0	0
	50-66	---	3.0-12	3.5-6.5	0	0
	66-85	---	3.0-12	3.5-6.5	0	0
Johnston-------------	0-26	---	9.0-22	4.5-5.5	0	0
	26-48	---	1.0-6.0	4.5-5.5	0	0
	48-68	---	1.0-5.0	4.5-5.5	0	0
89:						
Udorthents-----------	0-80	---	---	---	---	---
90:						
Pits-----------------	0-80	---	---	---	---	---
95:						
Axis-----------------	0-6	10-25	---	6.1-8.4	4.0-8.0	0
	6-40	5.0-15	---	6.1-8.4	4.0-8.0	0
	40-80	5.0-25	---	6.1-8.4	2.0-4.0	0
96:						
Handsboro------------	0-4	10-35	---	6.6-8.4	16.0-32.0	0
	4-26	25-60	---	6.6-8.4	16.0-32.0	0
	26-62	25-60	---	6.6-8.4	16.0-32.0	0
97:						
Maurepas-------------	0-54	35-100	---	5.6-8.4	0.0-4.0	0
226:						
Bayou----------------	0-7	---	0.5-4.0	4.5-5.5	0	0
	7-40	---	1.0-5.0	4.5-5.5	0	0
	40-80	---	2.0-6.0	3.6-6.0	0	0
328:						
Harleston------------	0-6	---	0.5-3.0	3.6-5.5	0	0
	6-42	---	1.0-4.0	4.5-5.5	0	0
	42-62	---	1.0-6.0	4.5-5.5	0	0
329:						
Harleston------------	0-6	---	0.5-3.0	3.6-5.5	0	0
	6-42	---	1.0-4.0	4.5-5.5	0	0
	42-62	---	1.0-6.0	4.5-5.5	0	0

Table 17.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity	Sodium adsorption ratio
	Inches	*meq/100 g*	*meq/100 g*	*pH*	*mmhos/cm*	
330:						
Harleston------------	0-6	---	0.5-3.0	3.6-5.5	0	0
	6-42	---	1.0-4.0	4.5-5.5	0	0
	42-62	---	1.0-6.0	4.5-5.5	0	0
365:						
Duckston-------------	0-13	0.1-3.0	---	3.5-8.4	8.0-16.0	7-20
	13-70	0.1-3.0	---	3.5-8.4	4.0-8.0	7-20
386:						
Newhan---------------	0-2	0.1-3.0	---	5.1-7.8	4.0-16.0	7-20
	2-80	0.1-3.0	---	5.1-7.8	4.0-16.0	7-20
Corolla--------------	0-5	0.1-5.0	---	5.6-7.8	4.0-16.0	7-20
	5-80	0.1-3.0	---	5.6-7.8	4.0-16.0	7-20
387:						
Beaches--------------	0-80	---	---	5.1-7.8	4.0-32.0	0
388:						
Latonia--------------	0-6	---	0.5-3.0	4.5-5.5	0	0
	6-44	---	1.0-5.0	4.5-5.5	0	0
	44-80	---	0.5-2.0	4.5-5.5	0	0
528:						
Columbus-------------	0-6	---	1.0-5.0	4.5-5.5	0	0
	6-52	---	2.0-10	4.5-5.5	0	0
	52-82	---	1.0-5.0	4.5-5.5	0	0

Table 18.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	*In*		*In*	*In*			
2:									
Kinston	---	---	---	---	0	0	None	High	High
Chastain	---	---	---	---	0	0	None	High	High
Mantachie	---	---	---	---	0	0	None	High	High
3:									
Atmore	---	---	---	---	0	0	None	High	High
4:									
Lenoir	---	---	---	---	0	0	None	High	High
5:									
Benndale	---	---	---	---	0	0	None	Low	Moderate
6:									
Benndale	---	---	---	---	0	0	None	Low	Moderate
8:									
Latonia	---	---	---	---	0	0	None	Low	Moderate
12:									
Arat	---	---	---	---	2-6	6-15	None	High	Moderate
13:									
Daleville	---	---	---	---	0	0	None	High	High
14:									
Daleville	---	---	---	---	0	0	None	High	High
16:									
Eustis	---	---	---	---	0	0	None	Low	High
17:									
Eustis	---	---	---	---	0	0	None	Low	High
18:									
Eustis	---	---	---	---	0	0	None	Low	High
21:									
Bigbee	---	---	---	---	0	0	None	Low	Moderate

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	*In*		*In*	*In*			
22:									
Myatt------------------	---	---	---	---	0	0	None	High	High
24:									
Hyde-------------------	---	---	---	---	0	0	None	High	High
25:									
Quitman----------------	---	---	---	---	0	0	None	High	Moderate
26:									
Smithton---------------	---	---	---	---	0	0	None	High	High
27:									
Johns------------------	---	---	---	---	0	0	None	Moderate	High
28:									
Vancleave--------------	Fragipan	24-50	20-60	Weakly cemented	0	0	None	Moderate	High
29:									
Vancleave--------------	Fragipan	24-50	20-60	Weakly cemented	0	0	None	Moderate	High
30:									
Vancleave--------------	Fragipan	24-50	20-60	Weakly cemented	0	0	None	Moderate	High
32:									
Escambia---------------	---	---	---	---	0	0	None	Moderate	High
33:									
Escambia---------------	---	---	---	---	0	0	None	Moderate	High
36:									
Smithdale--------------	---	---	---	---	0	0	None	Low	Moderate
Boykin-----------------	---	---	---	---	0	0	None	Low	High
44:									
Malbis-----------------	---	---	---	---	0	0	None	Moderate	Moderate
45:									
Malbis-----------------	---	---	---	---	0	0	None	Moderate	Moderate
48:									
Suffolk----------------	---	---	---	---	0	0	None	Moderate	High
50:									
Ruston-----------------	---	---	---	---	0	0	None	Moderate	Moderate

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	*In*		*In*	*In*			
51:									
Bama	---	---	---	---	0	0	None	Low	Moderate
52:									
Bama	---	---	---	---	0	0	None	Low	Moderate
53:									
Bama	---	---	---	---	0	0	None	Low	Moderate
55:									
Ocilla	---	---	---	---	0	0	None	High	Moderate
56:									
Benndale	---	---	---	---	0	0	None	Low	Moderate
57:									
Poarch	---	---	---	---	0	0	None	Low	High
58:									
Benndale	---	---	---	---	0	0	None	Low	Moderate
62:									
Prentiss	Fragipan	20-32	20-60	Weakly cemented	0	0	None	Moderate	High
63:									
Stough	---	---	---	---	0	0	None	Moderate	High
66:									
Freest	---	---	---	---	0	0	None	High	High
68:									
Saucier	---	---	---	---	0	0	None	Moderate	High
76:									
Nugent	---	---	---	---	0	0	None	Low	Moderate
Jena	---	---	---	---	0	0	None	Low	High
78:									
Susquehanna	---	---	---	---	0	0	None	High	High
Freest	---	---	---	---	0	0	None	High	High
79:									
Susquehanna	---	---	---	---	0	0	None	High	High
Freest	---	---	---	---	0	0	None	High	High

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
80:									
Susquehanna	---	---	---	---	0	0	None	High	High
84:									
Wadley	---	---	---	---	0	0	None	Low	High
85:									
Leon	---	---	---	---	0	0	None	High	High
88:									
Croatan	---	---	---	---	4-10	18-24	None	High	High
Johnston	---	---	---	---	0	0	None	High	High
89:									
Udorthents	---	---	---	---	---	---	None	---	---
90:									
Pits	---	---	---	---	0	0	None	---	---
95:									
Axis	---	---	---	---	0	0	None	High	High
96:									
Handsboro	---	---	---	---	15-30	51	None	High	High
97:									
Maurepas	---	---	---	---	15-30	51	None	High	High
226:									
Bayou	---	---	---	---	0	0	None	High	High
328:									
Harleston	---	---	---	---	0	0	None	Moderate	High
329:									
Harleston	---	---	---	---	0	0	None	Moderate	High
330:									
Harleston	---	---	---	---	0	0	None	Moderate	High
365:									
Duckston	---	---	---	---	0	0	None	Low	Low
386:									
Newhan	---	---	---	---	0	0	None	High	Low

Table 18.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	*In*		*In*	*In*			
386:									
Corolla	---	---	---	---	0	0	None	Low	Low
387:									
Beaches	---	---	---	---	0	0	None	High	High
388:									
Latonia	---	---	---	---	0	0	None	Low	Moderate
528:									
Columbus	---	---	---	---	0	0	None	High	High

Table 19.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
2:										
Kinston-------------------	D	Negligible	January	0.0-1.0	>6.0	---	---	None	Long	Frequent
			February	0.0-1.0	>6.0	---	---	None	Long	Frequent
			March	0.0-1.0	>6.0	---	---	None	Long	Frequent
			April	0.0-1.0	>6.0	---	---	None	Long	Frequent
			May	0.0-1.0	>6.0	---	---	None	Long	Frequent
			June	0.0-1.0	>6.0	---	---	None	Long	Frequent
			December	0.0-1.0	>6.0	---	---	None	Long	Frequent
Chastain------------------	D	Negligible	January	0.0-1.0	>6.0	---	---	None	Long	Frequent
			February	0.0-1.0	>6.0	---	---	None	Long	Frequent
			March	0.0-1.0	>6.0	---	---	None	Long	Frequent
			April	0.0-1.0	>6.0	---	---	None	Long	Frequent
			May	0.0-1.0	>6.0	---	---	None	Long	Frequent
			June	0.0-1.0	>6.0	---	---	None	Long	Frequent
			December	0.0-1.0	>6.0	---	---	None	Long	Frequent
Mantachie-----------------	C	Negligible	January	1.0-1.5	>6.0	---	---	None	Long	Frequent
			February	1.0-1.5	>6.0	---	---	None	Long	Frequent
			March	1.0-1.5	>6.0	---	---	None	Long	Frequent
			April	1.0-1.5	>6.0	---	---	None	Long	Frequent
			May	---	---	---	---	None	Long	Frequent
			June	---	---	---	---	None	Long	Frequent
			December	1.0-1.5	>6.0	---	---	None	Long	Frequent
3:										
Atmore--------------------	D	Low	January	0.0-1.0	2.0-6.0	---	---	None	---	---
			February	0.0-1.0	2.0-6.0	---	---	None	---	---
			March	0.0-1.0	2.0-6.0	---	---	None	---	---
			April	0.0-1.0	2.0-6.0	---	---	None	---	---
			December	0.0-1.0	2.0-6.0	---	---	None	---	---
4:										
Lenoir--------------------	D	Low	January	1.0-2.5	>6.0	---	---	None	---	---
			February	1.0-2.5	>6.0	---	---	None	---	---
			March	1.0-2.5	>6.0	---	---	None	---	---
			April	1.0-2.5	>6.0	---	---	None	---	---
			December	1.0-2.5	>6.0	---	---	None	---	---
5:										
Benndale------------------	B	Low	Jan-Dec	---	---	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
6:										
Benndale	B	Medium	Jan-Dec	---	---	---	---	None	---	---
8:										
Latonia	B	Very low	January	---	---	---	---	None	Brief	Occasional
			February	---	---	---	---	None	Brief	Occasional
			March	---	---	---	---	None	Brief	Occasional
			April	---	---	---	---	None	Brief	Occasional
			December	---	---	---	---	None	Brief	Occasional
12:										
Arat	D	Negligible	Jan-Dec	0.0	>6.0	0.0-3.0	Very long	Frequent	Long	Frequent
13:										
Daleville	D	Very low	January	0.0-1.0	>6.0	---	---	None	---	---
			February	0.0-1.0	>6.0	---	---	None	---	---
			March	0.0-1.0	>6.0	---	---	None	---	---
			April	0.0-1.0	>6.0	---	---	None	---	---
			December	0.0-1.0	>6.0	---	---	None	---	---
14:										
Daleville	D	Negligible	January	0.0-1.0	>6.0	0.0-1.5	Long	Frequent	---	---
			February	0.0-1.0	>6.0	0.0-1.5	Long	Frequent	---	---
			March	0.0-1.0	>6.0	0.0-1.5	Long	Frequent	---	---
			April	0.0-1.0	>6.0	0.0-1.5	Long	Frequent	---	---
			December	0.0-1.0	>6.0	0.0-1.5	Long	Frequent	---	---
16:										
Eustis	A	Low	Jan-Dec	---	---	---	---	None	---	---
17:										
Eustis	A	Low	Jan-Dec	---	---	---	---	None	---	---
18:										
Eustis	A	Medium	Jan-Dec	---	---	---	---	None	---	---
21:										
Bigbee	A	Very low	January	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			February	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			March	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			April	3.5-6.0	>6.0	---	---	None	Brief	Occasional
			December	3.5-6.0	>6.0	---	---	None	Brief	Occasional

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	*Ft*	*Ft*				
22:										
Myatt----------------------	D	Very low	January	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			February	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			March	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			April	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			December	0.0-1.0	>6.0	---	---	None	Brief	Occasional
24:										
Hyde-----------------------	D	Negligible	January	0.0-1.5	>6.0	---	---	None	---	---
			February	0.0-1.5	>6.0	---	---	None	---	---
			March	0.0-1.5	>6.0	---	---	None	---	---
			April	0.0-1.5	>6.0	---	---	None	---	---
			May	0.0-1.5	>6.0	---	---	None	---	---
			December	0.0-1.5	>6.0	---	---	None	---	---
25:										
Quitman--------------------	C	Low	January	1.5-2.0	2.0-6.0	---	---	None	---	---
			February	1.5-2.0	2.0-6.0	---	---	None	---	---
			March	1.5-2.0	2.0-6.0	---	---	None	---	---
			April	1.5-2.0	2.0-6.0	---	---	None	---	---
			December	1.5-2.0	2.0-6.0	---	---	None	---	---
26:										
Smithton-------------------	D	Very low	January	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			February	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			March	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			April	0.0-1.0	>6.0	---	---	None	Brief	Occasional
			December	0.0-1.0	>6.0	---	---	None	Brief	Occasional
27:										
Johns----------------------	C	Very low	January	1.5-3.0	>6.0	---	---	None	---	---
			February	1.5-3.0	>6.0	---	---	None	---	---
			March	1.5-3.0	>6.0	---	---	None	---	---
			April	1.5-3.0	>6.0	---	---	None	---	---
			December	1.5-3.0	>6.0	---	---	None	---	---
28:										
Vancleave------------------	C	Very low	January	1.5-3.0	3.0-6.0	---	---	None	---	---
			February	1.5-3.0	3.0-6.0	---	---	None	---	---
			March	1.5-3.0	3.0-6.0	---	---	None	---	---
			April	1.5-3.0	3.0-6.0	---	---	None	---	---
			December	1.5-3.0	3.0-6.0	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	*Ft*	*Ft*				
29:										
Vancleave	C	Low	January	1.5-3.0	3.0-6.0	---	---	None	---	---
			February	1.5-3.0	3.0-6.0	---	---	None	---	---
			March	1.5-3.0	3.0-6.0	---	---	None	---	---
			April	1.5-3.0	3.0-6.0	---	---	None	---	---
			December	1.5-3.0	3.0-6.0	---	---	None	---	---
30:										
Vancleave	C	Medium	January	1.5-3.0	3.0-6.0	---	---	None	---	---
			February	1.5-3.0	3.0-6.0	---	---	None	---	---
			March	1.5-3.0	3.0-6.0	---	---	None	---	---
			April	1.5-3.0	3.0-6.0	---	---	None	---	---
			December	1.5-3.0	3.0-6.0	---	---	None	---	---
32:										
Escambia	C	Very low	January	1.5-2.5	2.5-6.0	---	---	None	---	---
			February	1.5-2.5	2.5-6.0	---	---	None	---	---
			March	1.5-2.5	2.5-6.0	---	---	None	---	---
			April	1.5-2.5	2.5-6.0	---	---	None	---	---
			December	1.5-2.5	2.5-6.0	---	---	None	---	---
33:										
Escambia	C	Low	January	1.5-2.5	2.5-6.0	---	---	None	---	---
			February	1.5-2.5	2.5-6.0	---	---	None	---	---
			March	1.5-2.5	2.5-6.0	---	---	None	---	---
			April	1.5-2.5	2.5-6.0	---	---	None	---	---
			December	1.5-2.5	2.5-6.0	---	---	None	---	---
36:										
Smithdale	B	High	Jan-Dec	---	---	---	---	None	---	---
Boykin	A	Medium	Jan-Dec	---	---	---	---	None	---	---
44:										
Malbis	B	Low	January	2.5-4.0	3.0-6.0	---	---	None	---	---
			February	2.5-4.0	3.0-6.0	---	---	None	---	---
			March	2.5-4.0	3.0-6.0	---	---	None	---	---
			April	2.5-4.0	3.0-6.0	---	---	None	---	---
			December	2.5-4.0	3.0-6.0	---	---	None	---	---
45:										
Malbis	B	Medium	January	2.5-4.0	3.0-6.0	---	---	None	---	---
			February	2.5-4.0	3.0-6.0	---	---	None	---	---
			March	2.5-4.0	3.0-6.0	---	---	None	---	---
			April	2.5-4.0	3.0-6.0	---	---	None	---	---
			December	2.5-4.0	3.0-6.0	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
48:										
Suffolk	B	Low	Jan-Dec	---	---	---	---	None	---	---
50:										
Ruston	B	Low	Jan-Dec	---	---	---	---	None	---	---
51:										
Bama	B	Low	Jan-Dec	---	---	---	---	None	---	---
52:										
Bama	B	Low	Jan-Dec	---	---	---	---	None	---	---
53:										
Bama	B	Medium	Jan-Dec	---	---	---	---	None	---	---
55:										
Ocilla	C	Very low	January	1.0-2.5	3.5-6.0	---	---	None	Brief	Occasional
			February	1.0-2.5	3.5-6.0	---	---	None	Brief	Occasional
			March	1.0-2.5	3.5-6.0	---	---	None	Brief	Occasional
			April	1.0-2.5	3.5-6.0	---	---	None	Brief	Occasional
			December	1.0-2.5	3.5-6.0	---	---	None	Brief	Occasional
56:										
Benndale	B	Medium	Jan-Dec	---	---	---	---	None	---	---
57:										
Poarch	B	Low	January	2.5-5.0	3.0-6.0	---	---	None	---	---
			February	2.5-5.0	3.0-6.0	---	---	None	---	---
			March	2.5-5.0	3.0-6.0	---	---	None	---	---
			April	2.5-5.0	3.0-6.0	---	---	None	---	---
			December	2.5-5.0	3.0-6.0	---	---	None	---	---
58:										
Benndale	B	Medium	Jan-Dec	---	---	---	---	None	---	---
62:										
Prentiss	C	Very low	January	2.0-2.5	2.5-6.0	---	---	None	---	---
			February	2.0-2.5	2.5-6.0	---	---	None	---	---
			March	2.0-2.5	2.5-6.0	---	---	None	---	---
			April	2.0-2.5	2.5-6.0	---	---	None	---	---
			December	2.0-2.5	2.5-6.0	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
63:										
Stough--------------------	C	Very low	January	1.0-1.5	2.5-6.0	---	---	None	---	---
			February	1.0-1.5	2.5-6.0	---	---	None	---	---
			March	1.0-1.5	2.5-6.0	---	---	None	---	---
			April	1.0-1.5	2.5-6.0	---	---	None	---	---
			December	1.0-1.5	2.5-6.0	---	---	None	---	---
66:										
Freest--------------------	C	Medium	January	1.5-2.5	2.5-6.0	---	---	None	---	---
			February	1.5-2.5	2.5-6.0	---	---	None	---	---
			March	1.5-2.5	2.5-6.0	---	---	None	---	---
			April	1.5-2.5	2.5-6.0	---	---	None	---	---
			December	1.5-2.5	2.5-6.0	---	---	None	---	---
68:										
Saucier-------------------	C	Low	January	2.5-4.0	3.0-6.0	---	---	None	---	---
			February	2.5-4.0	3.0-6.0	---	---	None	---	---
			March	2.5-4.0	3.0-6.0	---	---	None	---	---
			April	2.5-4.0	3.0-6.0	---	---	None	---	---
			December	2.5-4.0	3.0-6.0	---	---	None	---	---
76:										
Nugent--------------------	A	Negligible	January	3.5-6.0	>6.0	---	---	None	Long	Frequent
			February	3.5-6.0	>6.0	---	---	None	Long	Frequent
			March	3.5-6.0	>6.0	---	---	None	Long	Frequent
			April	3.5-6.0	>6.0	---	---	None	Long	Frequent
			December	3.5-6.0	>6.0	---	---	None	Long	Frequent
Jena----------------------	B	Negligible	January	---	---	---	---	None	Long	Frequent
			February	---	---	---	---	None	Long	Frequent
			March	---	---	---	---	None	Long	Frequent
			April	---	---	---	---	None	Long	Frequent
			December	---	---	---	---	None	Long	Frequent
78:										
Susquehanna---------------	D	Medium	Jan-Dec	---	---	---	---	None	---	---
Freest--------------------	C	Medium	January	1.5-2.5	2.5-6.0	---	---	None	---	---
			February	1.5-2.5	2.5-6.0	---	---	None	---	---
			March	1.5-2.5	2.5-6.0	---	---	None	---	---
			April	1.5-2.5	2.5-6.0	---	---	None	---	---
			December	1.5-2.5	2.5-6.0	---	---	None	---	---
79:										
Susquehanna---------------	D	High	Jan-Dec	---	---	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
79:										
Freest	C	Medium	January	1.5-2.5	2.5-6.0	---	---	None	---	---
			February	1.5-2.5	2.5-6.0	---	---	None	---	---
			March	1.5-2.5	2.5-6.0	---	---	None	---	---
			April	1.5-2.5	2.5-6.0	---	---	None	---	---
			December	1.5-2.5	2.5-6.0	---	---	None	---	---
80:										
Susquehanna	D	High	Jan-Dec	---	---	---	---	None	---	---
84:										
Wadley	A	Low	Jan-Dec	---	---	---	---	None	---	---
85:										
Leon	D	Very low	January	0.0-1.0	>6.0	---	---	None	---	---
			February	0.0-1.0	>6.0	---	---	None	---	---
			March	0.0-1.0	>6.0	---	---	None	---	---
			April	0.0-1.0	>6.0	---	---	None	---	---
			December	0.0-1.0	>6.0	---	---	None	---	---
88:										
Croatan	D	Negligible	January	0.0-1.0	>6.0	---	---	None	Long	Frequent
			February	0.0-1.0	>6.0	---	---	None	Long	Frequent
			March	0.0-1.0	>6.0	---	---	None	Long	Frequent
			April	0.0-1.0	>6.0	---	---	None	Long	Frequent
			May	0.0-1.0	>6.0	---	---	None	Long	Frequent
			November	0.0-1.0	>6.0	---	---	None	Long	Frequent
			December	0.0-1.0	>6.0	---	---	None	Long	Frequent
Johnston	D	Negligible	January	0.0-1.5	>6.0	---	---	None	Long	Frequent
			February	0.0-1.5	>6.0	---	---	None	Long	Frequent
			March	0.0-1.5	>6.0	---	---	None	Long	Frequent
			April	0.0-1.5	>6.0	---	---	None	Long	Frequent
			May	0.0-1.5	>6.0	---	---	None	Long	Frequent
			November	0.0-1.5	>6.0	---	---	None	Long	Frequent
			December	0.0-1.5	>6.0	---	---	None	Long	Frequent
89:										
Udorthents	C	High	Jan-Dec	---	---	---	---	None	---	---
90:										
Pits	B	High	Jan-Dec	---	---	---	---	None	---	---
95:										
Axis	D	Negligible	Jan-Dec	0.0-1.0	>6.0	---	---	None	Very brief	Frequent

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
96:										
Handsboro-----------------	D	Negligible	Jan-Dec	0.0-0.5	>6.0	0.0-1.0	Very long	Frequent	Long	Frequent
97:										
Maurepas------------------	D	Negligible	Jan-Dec	0.0-0.5	>6.0	0.0-1.0	Very long	Frequent	Long	Frequent
226:										
Bayou---------------------	D	Very low	January	0.0-1.0	>6.0	---	---	None	---	---
			February	0.0-1.0	>6.0	---	---	None	---	---
			March	0.0-1.0	>6.0	---	---	None	---	---
			April	0.0-1.0	>6.0	---	---	None	---	---
			December	0.0-1.0	>6.0	---	---	None	---	---
328:										
Harleston-----------------	C	Very low	January	2.0-3.0	>6.0	---	---	None	---	---
			February	2.0-3.0	>6.0	---	---	None	---	---
			March	2.0-3.0	>6.0	---	---	None	---	---
			April	2.0-3.0	>6.0	---	---	None	---	---
			December	2.0-3.0	>6.0	---	---	None	---	---
329:										
Harleston-----------------	C	Low	January	2.0-3.0	>6.0	---	---	None	---	---
			February	2.0-3.0	>6.0	---	---	None	---	---
			March	2.0-3.0	>6.0	---	---	None	---	---
			April	2.0-3.0	>6.0	---	---	None	---	---
			December	2.0-3.0	>6.0	---	---	None	---	---
330:										
Harleston-----------------	C	Medium	January	2.0-3.0	>6.0	---	---	None	---	---
			February	2.0-3.0	>6.0	---	---	None	---	---
			March	2.0-3.0	>6.0	---	---	None	---	---
			April	2.0-3.0	>6.0	---	---	None	---	---
			December	2.0-3.0	>6.0	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	*Ft*	*Ft*				
365:										
Duckston------------------	D	Negligible	January	0.0-0.5	>6.0	---	---	None	---	---
			February	0.0-0.5	>6.0	---	---	None	---	---
			March	0.0-0.5	>6.0	---	---	None	---	---
			April	0.0-0.5	>6.0	---	---	None	---	---
			May	0.0-0.5	>6.0	---	---	None	---	---
			June	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			July	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			August	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			September	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			October	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			November	0.0-0.5	>6.0	---	---	None	Very brief	Rare
			December	0.0-0.5	>6.0	---	---	None	---	---
386:										
Newhan--------------------	A	Very low	June	---	---	---	---	None	Very brief	Rare
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
Corolla-------------------	D	Very low	January	1.5-3.0	>6.0	---	---	None	---	---
			February	1.5-3.0	>6.0	---	---	None	---	---
			March	1.5-3.0	>6.0	---	---	None	---	---
			April	1.5-3.0	>6.0	---	---	None	---	---
			May	1.5-3.0	>6.0	---	---	None	---	---
			June	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			July	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			August	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			September	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			October	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			November	1.5-3.0	>6.0	---	---	None	Very brief	Rare
			December	1.5-3.0	>6.0	---	---	None	---	---
387:										
Beaches-------------------	D	Negligible	Jan-Dec	0.0-3.0	>6.0	---	---	None	Very brief	Frequent
388:										
Latonia-------------------	B	Very low	Jan-Dec	---	---	---	---	None	---	---

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
528:										
Columbus------------------	C	Very low	January	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			February	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			March	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			April	2.0-3.0	>6.0	---	---	None	Brief	Occasional
			December	2.0-3.0	>6.0	---	---	None	Brief	Occasional

Table 20.--Taxonomic Classification of the Soils

[An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series]

Soil name	Family or higher taxonomic class
Arat	Fine-silty, siliceous, superactive, nonacid, thermic Typic Hydraquents
Atmore	Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleaquults
Axis	Coarse-loamy, mixed, superactive, nonacid, thermic Typic Sulfaquents
Bama	Fine-loamy, siliceous, subactive, thermic Typic Paleudults
Bayou	Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults
Benndale	Coarse-loamy, siliceous, semiactive, thermic Typic Paleudults
Bigbee	Thermic, coated Typic Quartzipsamments
Boykin	Loamy, siliceous, active, thermic Arenic Paleudults
Chastain	Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts
Columbus	Fine-loamy, siliceous, semiactive, thermic Aquic Hapludults
Corolla	Thermic, uncoated Aquic Quartzipsamments
Croatan	Loamy, siliceous, dysic, thermic Terric Haplosaprists
Daleville	Fine-loamy, siliceous, active, thermic Typic Paleaquults
Duckston	Siliceous, thermic Typic Psammaquents
Escambia	Coarse-loamy, siliceous, semiactive, thermic Plinthaquic Paleudults
Eustis	Siliceous, thermic Psammentic Paleudults
Freest	Fine-loamy, siliceous, active, thermic Aquic Paleudalfs
Handsboro	Euic, thermic Typic Sulfihemists
Harleston	Coarse-loamy, siliceous, semiactive, thermic Aquic Paleudults
Hyde	Fine-silty, mixed, active, thermic Typic Umbraquults
Jena	Coarse-loamy, siliceous, active, thermic Fluventic Dystrudepts
Johns	Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Aquic Hapludults
Johnston	Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts
Kinston	Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts
Latonia	Coarse-loamy, siliceous, semiactive, thermic Typic Hapludults
Lenoir	Fine, mixed, semiactive, thermic Aeric Paleaquults
Leon	Sandy, siliceous, thermic Aeric Alaquods
Malbis	Fine-loamy, siliceous, subactive, thermic Plinthic Paleudults
Mantachie	Fine-loamy, siliceous, active, acid, thermic Fluventic Endoaquepts
Maurepas	Euic, hyperthermic Typic Haplosaprists
Myatt	Fine-loamy, siliceous, active, thermic Typic Endoaquults
Newhan	Thermic, uncoated Typic Quartzipsamments
Nugent	Sandy, siliceous, thermic Typic Udifluvents
Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Poarch	Coarse-loamy, siliceous, semiactive, thermic Plinthic Paleudults
Prentiss	Coarse-loamy, siliceous, semiactive, thermic Glossic Fragiudults
*Quitman	Fine-silty, siliceous, semiactive, thermic Aquic Paleudults
Ruston	Fine-loamy, siliceous, semiactive, thermic Typic Paleudults
Saucier	Fine-loamy, siliceous, subactive, thermic Plinthaquic Paleudults
Smithdale	Fine-loamy, siliceous, subactive, thermic Typic Hapludults
Smithton	Coarse-loamy, siliceous, semiactive, thermic Typic Paleaquults
Stough	Coarse-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults
Suffolk	Fine-loamy, siliceous, semiactive, thermic Typic Hapludults
Susquehanna	Fine, smectitic, thermic Vertic Paleudalfs
Udorthents	Thermic Typic Udorthents
Vancleave	Coarse-loamy, siliceous, semiactive, thermic Plinthic Fragiudults
Wadley	Loamy, siliceous, subactive, thermic Grossarenic Paleudults

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