USDA United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Mississippi Agricultural and Forestry Experiment Station

Soil Survey of Kemper County, Mississippi

How to Use This Soil Survey

General Soil Map

The general soil map, which is the color map preceding the detailed soil maps, 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.

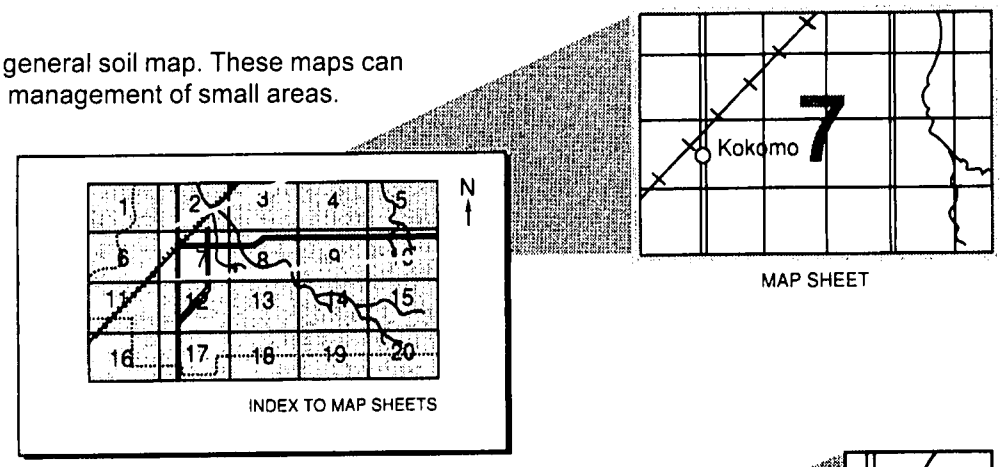
Detailed Soil Maps

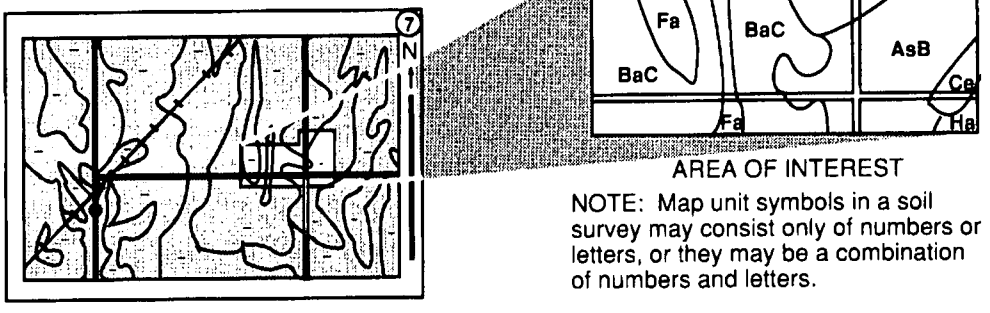
The detailed soil maps follow the general soil map. These maps can be useful in planning the use and management of small areas.

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

Locate your area of interest on the map sheet. Note the map units 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 **Summary of Tables** shows which table has data on a specific land use for each detailed soil map unit. See **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 1990. Soil names and descriptions were approved in 1991. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1990. This soil survey was made cooperatively by the Natural Resources Conservation Service and the Mississippi Agricultural and Forestry Experiment Station. It is part of the technical assistance furnished to the Kemper County Soil and Water Conservation District.

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

All programs and services of the Natural Resources Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

Cover: A corn mill in an area of Mantachie loam, frequently flooded.

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Issued 1999

Summary of Tables

Foreword

This soil survey contains information that can be used in land-planning programs in Kemper County. It contains predictions of soil behavior for selected land uses. The survey also highlights limitations and hazards inherent in the soil, 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.

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
State Conservationist
Natural Resources Conservation Service

Soil Survey of Kemper County, Mississippi

By Paul R. Brass, Natural Resources Conservation Service

Fieldwork by Paul R. Brass, Floyd V. Brent, Henry S. Galberry, Mac H. Robards, and Anthony Q. Wallace, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the Mississippi Agricultural and Forestry Experiment Station and the Kemper County Soil and Water Conservation District

KEMPER COUNTY is in the east-central part of Mississippi (fig. 1). The total area of Kemper County is about 490,600 acres, or about 766 square miles. In 1980, the population of the county was 10,148. Dekalb, the county seat, had a population of 1,159 in 1980.

Kemper County is bordered on the north by Winston and Noxubee Counties, on the west by Neshoba County, on the south by Lauderdale County, and on the east by Sumter County, Alabama. The county is about 33 miles wide and 24 miles long.

General Nature of the County

This section provides general information about Kemper County. It briefly describes climate, history and development, agriculture, and physiography and geology.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Kipling in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 46 degrees F and the average daily minimum temperature is 34 degrees. The lowest temperature on record, which occurred at Kipling on January 12, 1962, is -4 degrees. In summer, the average temperature is 78 degrees and the average daily maximum temperature is 90 degrees. The highest recorded temperature, which occurred at Kipling on August 31, 1951, is 104 degrees.

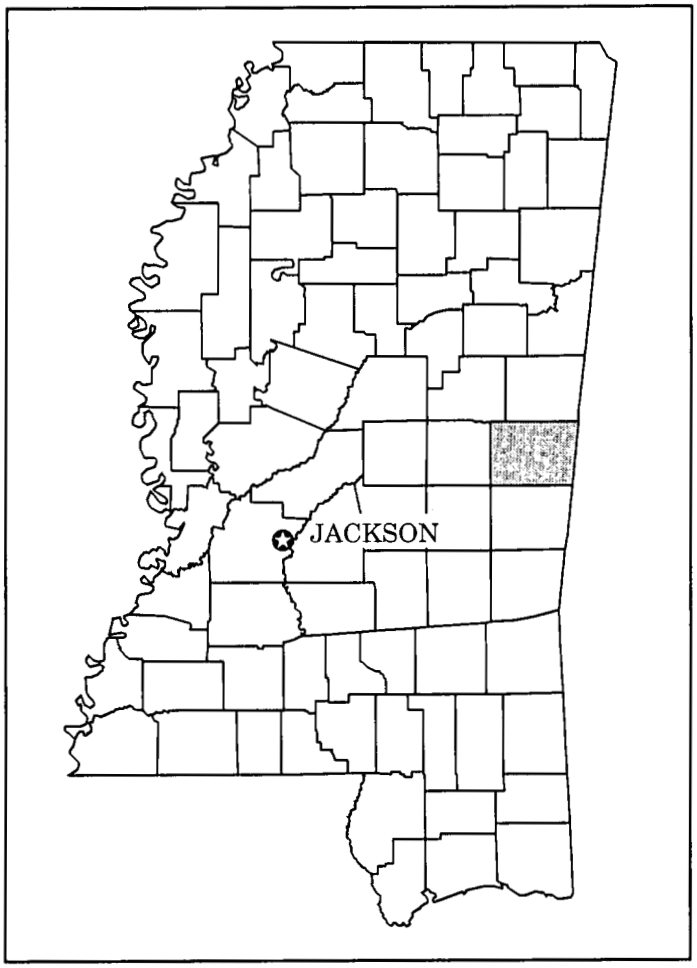

Figure 1.—Location of Kemper County in Mississippi.

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

The total annual precipitation is 56.03 inches. Of this, 26.36 inches, or 47 percent, usually falls in April through September. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 6.25 inches at Kipling on April 12, 1974. Thunderstorms occur on about 58 days each year, and most occur in July.

The average seasonal snowfall is 1.5 inches. The greatest snow depth at any one time during the period of record was 11 inches. The heaviest 1-day snowfall on record was 9.5 inches.

The average relative humidity in midafternoon is about 55 percent. Humidity is higher at night, and the average at dawn is about 89 percent. The sun shines 67 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 7.8 miles per hour, in March.

History and Development

The survey area was settled in the early 1820's. It was ceded to the United States by the Choctaw Indians on September 27, 1830, in the Treaty of Dancing Rabbit Creek. Kemper County was established by the Mississippi State Legislature on December 23, 1833 *(15)*. It was named in honor of Reuben Kemper, a soldier in the Florida and Mexican Wars and in the War of 1812.

The county seat, Dekalb, was named for Baron Johan Dekalb. He was a German citizen who enlisted in the French Army at an early age, came to America with the French General Lafayette to help fight in the Revolutionary War, and was killed in the Battle of Camden.

The population of Kemper County was about 17,929 in 1890. It increased to about 19,600 by 1920. The population decreased to less than 11,000 by 1980 *(12)*.

East Mississippi Community College was established in Kemper County in 1929 on about 240 acres. It is located about 12 miles east of Dekalb at Scooba.

Agriculture

Timber has been the main source of income in Kemper County for many years. The climate is favorable for growing most pines and hardwoods.

About 75 percent of Kemper County, or 367,950 acres, is used for commercial forests. This land is primarily located in the Coastal Plain and the Flatwoods areas in the county. About 2,600 acres of federal land is in Kemper County.

Lumber companies, once an important industry in Kemper County, are all but gone. Only small-scale operations remain.

In 1913, pine trees were the mill's stock-in-trade *(16)*. The trees were cut and brought to the mills in the town of Electric Mills, which is about 4 miles south of Scooba. They were cut, planed, dried, and sold as the nationally known "Nearwhite" lumber. The mills had a daily capacity of 300,000 board feet of lumber of exceptional manufacture and finish. The Mobile and Ohio Railroad shipped products out of the area.

Today, those lands produce timber for companies that produce pulpwood for paper and other operations. The timber is now shipped to mills in Philadelphia, Louisville, and Columbus, Mississippi, and to other cities in Alabama.

Cropland for growing most types of grain crops and for raising livestock has been an important source of income in the county for many years. The number of farms has decreased for the past several years, but the average size of the farms has increased.

Most of the acreage of cropland is located in the Blackland Prairie, which makes up about 12 percent of Kemper County. Some small farms are in the northwestern and southwestern parts of the county. The acreage in the northwestern part of the county contains the first water mill in Kemper County. The mill is over 200 years old, and it has been owned by the same family for about 120 years.

Physiography and Geology

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

Mississippi is entirely within the Gulf Coastal Plain physiographic province of North America. The state has been subdivided into 12 physiographic units. Three of these units, the Blackland Prairie, the Flatwoods, and the North Central Hills, are represented in Kemper County. Additionally, the major streams have formed fairly broad valleys that have flood plains and local terrace deposits.

Only the extreme northeastern corner of the county is in the Blackland Prairie. This unit is a broad, gently rolling terrain of slight to moderate relief and is underlain by chalks and marls of the Selma Group. The Flatwoods unit is a relatively narrow band of lowlands. It trends from the northwest to southeast in the remaining part of the northeastern part of the county. This unit, which is predominately underlain by the Porters Creek Clay, is generally flat and has little relief. A more undulating topography has developed along the western edge, where

the upper part of the Porters Creek Clay is sandy and is more resistant to erosion.

The North Central Hills unit is a rugged upland region that has moderate to steep relief over the sands and clays of the Wilcox Group. The remaining two-thirds of the county is in this group. A cuesta, commonly known as the Wilcox escarpment, traverses the county at the somewhat abrupt boundary between the North Central Hills and the Flatwoods. The elevation changes at a rate of up to 350 feet per mile along this cuesta. This represents the greatest relief in the county.

Kemper County is in the Tombigbee River, Pascagoula River, and Pearl River drainage basins. The eastern three-fourths of the county is drained to the east, mainly by Sucarnoochee Creek and its tributaries, Blackwater Creek and Pawticfaw Creek, and by Scooba Creek. Additionally, Wahalak Creek flows northeast and drains into the Noxubee River. These creeks eventually empty into the Tombigbee River in Alabama. The western one-fourth of the county is drained to the south, mainly by the Okatibbee and Chickasawhay Creeks, which eventually empty into the Pascagoula River system. The northwest section of the county is drained to the west by the Bogue Chitto Creek and its tributaries, which make up part of the Pearl River System.

The stratigraphic units exposed in Kemper County are composed of Cretaceous, Tertiary, and Quaternary aged sediments *(4)*. These sediments consist of varying amounts of chalk, marl, sands, clays and silts. Formations of the Cretaceous and Tertiary Systems crop out in concentric bands across the county (fig. 2). They present a generally northwest to southeast structural strike with dips ranging from less than one-half degree to one degree to the southwest.

The oldest unit exposed in Kemper County is the upper Cretaceous Demopolis Chalk *(11)*. This is a massive and generally dense, fossiliferous, relatively pure bluish gray to light gray chalk. It weathers to white when exposed. The Demopolis Chalk grades upward into a bluish gray, fossiliferous marl called the Bluffport Member.

Overlying and grading into the Bluffport Member is the Ripley Formation. This unit consists of bluish gray to greenish gray, sandy, calcareous clays and micaceous and glauconitic, sandy marls.

The youngest unit of Cretaceous age is the Prairie Bluff Chalk. This unit crops out to the west of the Ripley Formation in a narrow band that is generally less than two miles wide. This chalk is sandy, glauconitic, and very fossiliferous. It is blue-gray but weathers to white in exposed areas. Phosphatic molds are common along the base of the formation.

Tertiary aged sediments of the Midway Group unconformably overlie the Prairie Bluff Chalk. The formations of the Midway Group are the Clayton Formation, the Porters Creek Clay, and the Naheola Formation. The lowest unit, the Clayton Formation, consists of white to tan chalks and marls with sand and sandstone lenses locally occurring at the base of the formation. The Porters Creek Clay, a thick marine clay, conformably overlies the Clayton Formation. This formation consists of over 500 feet of blocky, gray to dark gray, massively bedded clay that weathers to a light gray when exposed. The upper beds grade into green-gray, glauconitic, sandy, calcareous clay and sands called the Matthews Landing Marl Member. This marl is relatively thin, but it is continuous and provides an excellent stratigraphic marker throughout Kemper County.

Bluish gray to black, carbonaceous clays and tan, cross-bedded, highly micaceous sands of the Naheola Formation make up the upper unit of the Midway Group.

The remaining one-half of the county, except for possibly a very small area in the extreme southwestern corner, is underlain by Eocene aged sediments of the Wilcox Group. These sediments unconformably overlie the Naheola Formation. They consist mainly of nonmarine sands, silty clays, and shales of the Nanafalia, Tuscahoma, and Hatchetigbee Formations. The sandy strata of the Wilcox Group provide a more rugged topography than the adjacent clays of the Flatwoods physiographic unit. Nearly all of the North Central Hill physiographic unit is in this part of the county.

Clairborn aged sands of the Tallahatta Formation are exposed in an area less than one square mile in size in southwestern Kemper County. These sands are probably Meridian Sands, and they have been described both as the lowest member of the Tallahatta Formation and as a separate formation underlying the Tallahatta and unconformably overlying the Wilcox *(13)*.

The youngest sediments in the county are Quaternary aged alluvium and terrace deposits found on the flood plains of the major streams and their tributaries. The sediments are generally locally derived sands, silts, and clays unconformably overlying older sediments.

How This Survey Was Made

This survey was made to provide information about the soils in the survey area. The information includes a description of the soils and their location and a discussion of the suitability, limitations, and management of the soils for specified uses. Soil scientists observed the steepness, length, and shape of slopes; the general pattern of drainage; the kinds of crops and native plants growing on the soils; 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 from which the soil formed. The unconsolidated material is devoid of

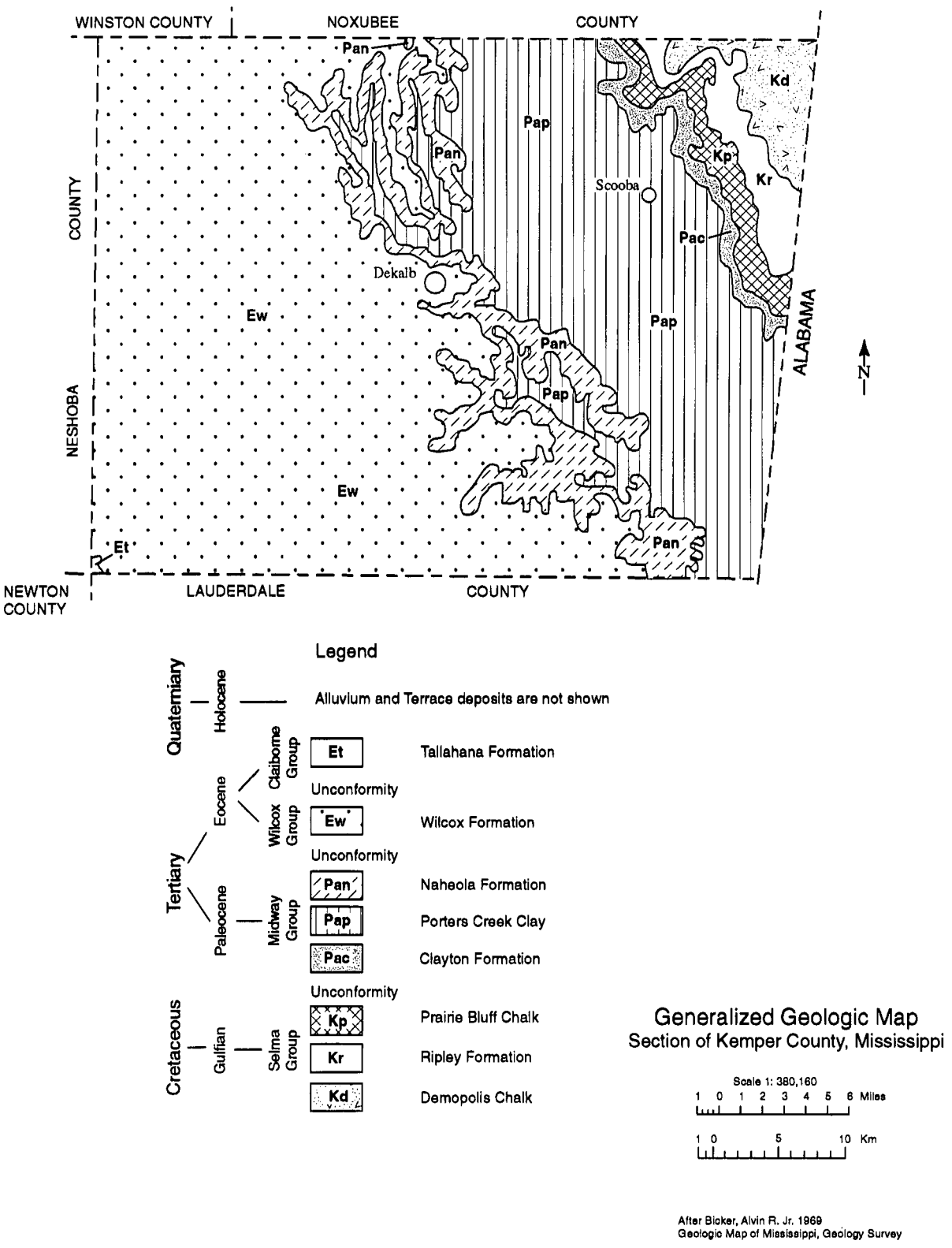

Figure 2.—Generalized geologic map of Kemper County.

roots and other living organisms and has not been changed by other biological activity.

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

Map Unit Composition

A map unit delineation on a soil map represents an area dominated by one major kind of soil or an area dominated by two or three kinds of soil. A map unit is identified and named according to the taxonomic classification of the dominant soil or soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural objects. In common with other natural objects, they have a characteristic variability in their properties. 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 soils of other taxonomic classes. Consequently, every map unit is made up of the soil or soils for which it is named and some soils that belong to other taxonomic classes. In the detailed soil map units, these latter soils are called inclusions or included soils. In the general soil map units, they are called soils of minor extent.

Most inclusions have properties and behavioral patterns 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 (similar) inclusions. They may or may not be mentioned in the map unit descriptions. Other inclusions, however, have properties and behavior divergent enough to affect use or require different management. These are contrasting (dissimilar) inclusions. They generally occupy small areas and cannot be shown separately on the soil maps because of the scale used in mapping. The inclusions of contrasting soils are mentioned in the map unit descriptions. A few

inclusions may not have been observed and consequently are not mentioned in the descriptions, especially where the soil pattern was so complex that it was impractical to make enough observations to identify all of the kinds of soils on the landscape.

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

General Soil Map Units

The general soil map at the back of 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 and some minor soils. It is named for the major soils. The soils making up one 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 a 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.

Dominantly Nearly Level Soils on Flood Plains and Terraces; Subject to Flooding

1. Catalpa-Leeper Association

Very deep, nearly level, somewhat poorly drained soils that formed in alluvium; on flood plains

Setting

Landform: Flood plains
Slope range: 0 to 2 percent

Composition

Percent of the county: 1
Catalpa soils—56 percent
Leeper soils—42 percent
Minor soils—2 percent

Soil Properties and Qualities

Catalpa

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Flats and depressions
Parent material: Alluvium
Surface textural class: Silty clay loam
Slope: 0 to 2 percent

Leeper

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Flats and depressions
Parent material: Alluvium
Surface textural class: Clay loam
Slope: Nearly level

Minor Soils

- Houlka soils in similar areas on flood plains

Use and Management

Major uses: Cropland, woodland
Management concerns: Flooding, wetness
Management measures:
- Row arrangement and surface field ditches help to remove excess surface water.

2. Houlka Association

Very deep, nearly level, somewhat poorly drained soils that formed in alluvium; on flood plains

Setting

Landform: Flood plains
Slope range: 0 to 2 percent

Composition

Percent of the county: 2
Houlka soils—92 percent
Minor soils—8 percent

Soil Properties and Qualities

Houlka

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Nearly level and depressional areas
Parent material: Alluvium
Surface textural class: Silty clay loam
Slope: Nearly level

Minor Soils

- The somewhat poorly drained Catalpa and poorly drained Kinston soils in slightly lower areas

Use and Management

Major uses: Woodland, cropland
Management concerns: Wetness, flooding
Management measures:
• Row arrangement and surface field ditches help to remove excess surface water.

3. Mooreville-Kinston-Mantachie Association

Very deep, nearly level, moderately well drained, poorly drained, and somewhat poorly drained soils that formed in alluvium; on flood plains

Setting

Landform: Flood plains
Slope range: 0 to 2 percent

Composition

Percent of the county: 4
Mooreville soils—37 percent
Kinston soils—29 percent
Mantachie soils—24 percent
Minor soils—10 percent

Soil Properties and Qualities

Mooreville

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Nearly level or undulating areas
Parent material: Alluvium
Surface textural class: Loam
Slope: 0 to 2 percent

Kinston

Depth class: Very deep
Drainage class: Poorly drained
Position on landform: Flats and depressions
Parent material: Alluvium
Surface textural class: Loam
Slope: 0 to 2 percent

Mantachie

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Broad flats
Parent material: Alluvium
Surface textural class: Loam
Slope: 0 to 2 percent

Minor Soils

• The poorly drained Daleville and well drained Jena soils on flood plains

Use and Management

Major uses: Woodland, pasture
Management concerns: Wetness, flooding
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.

4. Daleville-Jena Association

Very deep, nearly level, poorly drained and well drained soils that formed in Coastal Plain sediments on terraces and alluvium on flood plains

Setting

Landform: Flood plains and terraces
Slope range: 0 to 2 percent

Composition

Percent of the county: 1
Daleville soils—46 percent
Jena soils—34 percent
Minor soils—20 percent

Soil Properties and Qualities

Daleville

Depth class: Very deep
Drainage class: Poorly drained
Position on landform: Flats and depressions on terraces
Parent material: Loamy coastal plain sediments
Surface textural class: Sandy loam
Slope: 0 to 2 percent

Jena

Depth class: Very deep
Drainage class: Well drained
Position on landform: Convex areas on natural levees on flood plains
Parent material: Loamy alluvium
Surface textural class: Fine sandy loam
Slope: 0 to 2 percent

Minor Soils

• The somewhat poorly drained Quitman soils on terraces

Use and Management

Major uses: Woodland, pasture
Management concerns: Flooding, wetness
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.

5. Rosebloom-Arkabutla Association

Very deep, nearly level, poorly drained and somewhat poorly drained soils that formed in alluvium; on flood plains

Setting

Landform: Flood plains
Slope range: 0 to 2 percent

Composition

Percent of the county: 2
Rosebloom soils—52 percent
Arkabutla soils—37 percent
Minor soils—11 percent

Soil Properties and Qualities

Rosebloom

Depth class: Very deep
Drainage class: Poorly drained
Position on landform: Swales
Parent material: Alluvium
Surface textural class: Silt loam
Slope: 0 to 2 percent

Arkabutla

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Ridges
Parent material: Alluvium
Surface textural class: Silt loam
Slope: 0 to 2 percent

Minor Soils

• The somewhat poorly drained Mantachie and moderately well drained Mooreville soils on flood plains

Use and Management

Major uses: Woodland, pasture
Management concerns: Flooding, wetness
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.

Dominantly Nearly Level to Moderately Sloping Soils on Uplands and Terraces

6. Stough-Savannah-Kipling Association

Very deep, nearly level to moderately sloping, somewhat poorly drained and moderately well drained soils that formed in loamy and clayey sediments; on uplands and terraces

Setting

Landform: Uplands and terraces
Slope range: 0 to 8 percent

Composition

Percent of the county: 1
Stough soils—41 percent
Savannah soils—31 percent
Kipling soils—25 percent
Minor soils—3 percent

Soil Properties and Qualities

Stough

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Broad flats on terraces and on uplands
Parent material: Loamy material
Surface textural class: Fine sandy loam
Slope: 0 to 2 percent

Savannah

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Ridgetops and side slopes on uplands and terraces
Parent material: Loamy sediments
Surface textural class: Fine sandy loam
Slope: 0 to 8 percent

Kipling

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Ridgetops on uplands
Parent material: Clayey sediments
Surface textural class: Silty clay loam
Slope: 0 to 5 percent

Minor Soils

• The somewhat poorly drained Wilcox soils on uplands and the somewhat poorly drained Houlka soils on narrow flood plains

Use and Management

Major uses: Cropland, pasture
Management concerns: Erosion
Management measures:
• Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.

7. Wilcox Association

Deep, nearly level to very gently sloping, somewhat poorly drained soils that formed in clayey shale; on uplands

Setting

Landform: Uplands
Slope range: 0 to 3 percent

Composition

Percent of the county: 10
Wilcox soils—95 percent
Minor soils—5 percent

Soil Properties and Qualities

Wilcox

Depth class: Deep
Drainage class: Somewhat poorly drained
Position on landform: Broad flats
Parent material: Clayey shale
Surface textural class: Silty clay loam
Slope: 0 to 3 percent

Minor Soils

• The well drained Sweatman soils on uplands and the somewhat poorly drained Mantachie soils on narrow flood plains

Use and Management

Major uses: Woodland
Management concerns: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

8. Quitman-Stough Association

Very deep, nearly level to very gently sloping, somewhat poorly drained soils that formed in loamy material; on uplands and terraces

Setting

Landform: Uplands and terraces
Slope range: 0 to 3 percent

Composition

Percent of the county: 6
Quitman soils—46 percent
Stough soils—40 percent
Minor soils—14 percent

Soil Properties and Qualities

Quitman

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Broad flats on uplands and terraces
Parent material: Loamy marine sediments
Surface textural class: Silt loam
Slope: 0 to 3 percent

Stough

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Broad flats on uplands and terraces
Parent material: Loamy material
Surface textural class: Fine sandy loam
Slope: 0 to 3 percent

Minor Soils

• The moderately well drained Savannah soils on uplands and terraces and the somewhat poorly drained Mantachie soils on narrow flood plains

Use and Management

Major uses: Woodland
Management concerns: Wetness
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

9. Savannah-Ruston Association

Very deep, nearly level to moderately sloping, moderately well drained and well drained soils that formed in loamy sediments; on uplands and terraces

Setting

Landform: Uplands and terraces
Slope range: 0 to 8 percent

Composition

Percent of the county: 1
Savannah soils—65 percent
Ruston soils—30 percent
Minor soils—5 percent

Soil Properties and Qualities

Savannah

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Ridgetops and side slopes on terraces and uplands
Parent material: Loamy sediments
Surface textural class: Fine sandy loam
Slope: 0 to 8 percent

Ruston

Depth class: Very deep
Drainage class: Well drained
Position on landform: Ridgetops and side slopes on uplands
Parent material: Loamy marine sediments
Surface textural class: Fine sandy loam
Slope: 2 to 8 percent

Minor Soils

• The moderately well drained Ora and Prentiss soils on uplands and terraces and the moderately well drained Mooreville soils on narrow flood plains

Use and Management

Major uses: Cropland
Management concerns: Erosion
Management measures:
• Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.

Dominantly Gently Sloping to Steep Soils on Uplands

10. Sweatman-Smithdale Association

Very deep, moderately steep to steep, well drained soils that formed in loamy material; on uplands

Setting

Landform: Uplands
Slope range: 15 to 35 percent

Composition

Percent of the county: 31
Sweatman soils—46 percent
Smithdale soils—40 percent
Minor soils—14 percent

Soil Properties and Qualities

Sweatman

Depth class: Very deep
Drainage class: Well drained
Position on landform: Side slopes on uplands
Parent material: Marine sediments
Surface textural class: Fine sandy loam
Slope: 15 to 35 percent

Smithdale

Depth class: Very deep
Drainage class: Well drained
Position on landform: Side slopes on uplands
Parent material: Loamy material
Surface textural class: Fine sandy loam
Slope: 15 to 35 percent

Minor Soils

• The well drained Ruston soils on ridgetops in the uplands and the well drained Jena and moderately well drained Mooreville soils on narrow flood plains

Use and Management

Major uses: Woodland
Management concerns: Equipment limitation
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the equipment limitation.

11. Smithdale Association

Very deep, strongly sloping to steep, well drained soils that formed in loamy material; on uplands

Setting

Landform: Uplands
Slope range: 8 to 35 percent

Composition

Percent of the county: 7
Smithdale soils—92 percent
Minor soils—8 percent

Soil Properties and Qualities

Smithdale

Depth class: Very deep
Drainage class: Well drained
Position on landform: Hillsides on uplands
Parent material: Loamy material
Surface textural class: Fine sandy loam
Slope: 8 to 35 percent

Minor Soils

• The well drained Sweatman soils on the lower parts of hillsides, the well drained Ruston soils on ridgetops in the uplands, and the well drained Jena soils on narrow flood plains

Use and Management

Major uses: Woodland
Management concerns: Equipment limitation
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the equipment limitation.

12. Wilcox-Sweatman Association

Deep and very deep, strongly sloping to moderately steep, somewhat poorly drained and well drained soils that formed in clayey shale and marine sediments; on uplands

Setting

Landform: Uplands
Slope range: 8 to 17 percent

Composition

Percent of the county: 2
Wilcox soils—50 percent
Sweatman soils—37 percent
Minor soils—13 percent

Soil Properties and Qualities

Wilcox

Depth class: Deep
Drainage class: Somewhat poorly drained
Position on landform: Side slopes on uplands
Parent material: Clayey shale
Surface textural class: Silty clay loam
Slope: 8 to 17 percent

Sweatman

Depth class: Very deep
Drainage class: Well drained
Position on landform: Side slopes on uplands
Parent material: Marine sediments
Surface textural class: Fine sandy loam
Slope: 8 to 17 percent

Minor Soils

• The well drained Smithdale soils on the lower parts of hillsides in the uplands and the somewhat poorly drained Houlka soils on narrow flood plains

Use and Management

Major uses: Woodland
Management concerns: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

13. Smithdale-Ora-Sweatman Association

Very deep, gently sloping to steep, well drained and moderately well drained soils that formed in loamy material; on uplands

Setting

Landform: Uplands
Slope range: 2 to 35 percent

Composition

Percent of the county: 24
Smithdale soils—42 percent
Ora soils—36 percent
Sweatman soils—18 percent
Minor soils—4 percent

Soil Properties and Qualities

Smithdale

Depth class: Very deep
Drainage class: Well drained
Position on landform: Side slopes on uplands
Parent material: Loamy material
Surface textural class: Fine sandy loam
Slope: 8 to 35 percent

Ora

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Ridgetops and side slopes on uplands
Parent material: Loamy marine sediments
Surface textural class: Fine sandy loam
Slope: 2 to 12 percent

Sweatman

Depth class: Very deep
Drainage class: Well drained
Position on landform: Ridgetops and side slopes on uplands
Parent material: Marine sediments
Surface textural class: Fine sandy loam
Slope: 2 to 35 percent

Minor Soils

• The well drained Ruston and moderately well drained Savannah soils on ridgetops in the uplands

Use and Management

Major uses: Woodland, pasture
Management concerns: Equipment limitation, erosion
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the equipment limitation.
• Proper stocking rates, controlled grazing, and weed and brush control help to keep the pasture in good condition.

14. Kipling-Freest-Oktibbeha Association

Very deep, nearly level to strongly sloping, moderately well drained and somewhat poorly drained soils that formed in clayey sediments; on uplands

Setting

Landform: Uplands
Slope range: 0 to 12 percent

Composition

Percent of the county: 5
Kipling soils—51 percent
Freest soils—27 percent
Oktibbeha soils—16 percent
Minor soils—6 percent

Soil Properties and Qualities

Kipling

Depth class: Very deep
Drainage class: Somewhat poorly drained
Position on landform: Ridgetops on uplands
Parent material: Clayey sediments
Surface textural class: Silty clay loam
Slope: 0 to 5 percent

Freest

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Broad flats
Parent material: Loamy and clayey sediments
Surface textural class: Sandy loam
Slope: 0 to 5 percent

Oktibbeha

Depth class: Very deep
Drainage class: Moderately well drained
Position on landform: Side slopes on uplands
Parent material: Beds of acid clay overlying marly clay or chalk
Surface textural class: Silty clay loam
Slope: 5 to 12 percent

Minor Soils

- The well drained Okolona soils on uplands and terraces and the somewhat poorly drained Catalpa and Leeper soils on narrow flood plains

Use and Management

Major uses: Cropland, pasture
Management concerns: Erosion
Management measures:
- Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.
- Proper stocking rates, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Dominantly Nearly Level to Moderately Steep Soils over Chalk on Uplands

15. Binnsville-Demopolis-Sumter Association

Shallow and moderately deep, gently sloping to moderately steep, well drained soils that formed in chalk; on uplands

Setting

Landform: Uplands
Slope range: 2 to 17 percent

Composition

Percent of the county: 3
Binnsville soils—40 percent
Demopolis soils—31 percent
Sumter soils—20 percent
Minor soils—9 percent

Soil Properties and Qualities

Binnsville

Depth class: Shallow
Drainage class: Well drained
Position on landform: Ridgetops on uplands
Parent material: Chalk
Surface textural class: Silty clay loam
Slope: 2 to 5 percent

Demopolis

Depth class: Shallow
Drainage class: Well drained
Position on landform: Ridgetops and side slopes on uplands
Parent material: Chalk
Surface textural class: Silty clay loam
Slope: 2 to 17 percent

Sumter

Depth class: Moderately deep
Drainage class: Well drained
Position on landform: Side slopes on uplands
Parent material: Marly clay and chalk
Surface textural class: Silty clay loam
Slope: 5 to 17 percent

Minor Soils

- The somewhat poorly drained Kipling soils on uplands

and the somewhat poorly drained Catalpa and Leeper soils on flood plains

Use and Management

Major uses: Woodland

Management concerns: Plant competition, seedling mortality

Management measures:

- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Detailed Soil Map Units

The map units on the detailed soil maps at the back of this survey represent the soils in the survey area. The map unit descriptions in this section, along with the soil maps, can be used to determine the suitability and potential of a soil for specific uses. They also can be used to plan the management needed for those uses. More information on each map unit, or soil, is given under the heading "Use and Management of the Soils."

Each map unit on the detailed soil maps represents an area on the landscape and consists of one or more soils for which the unit is named.

A symbol identifying the soil precedes the map unit name in the soil descriptions. Each description includes general facts about the soil 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 or of the underlying material, 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 or of the underlying material. They also can differ in slope, stoniness, salinity, wetness, 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, Ora fine sandy loam, 2 to 5 percent slopes, eroded, is a phase of the Ora series.

Some map units are made up of two or more major soils. These map units are called soil complexes or soil associations.

A *soil complex* consists of two or more soils in such an intricate pattern or in such small areas that they cannot be shown separately on the soil maps. The pattern and proportion of the soils are somewhat similar in all areas. Binnsville-Demopolis complex, 2 to 5 percent slopes, eroded, is an example.

A *soil association* is made up of two or more geographically associated soils that are shown as one unit on the maps. Because of present or anticipated soil uses in the survey area, it was not considered practical or necessary to map the soils separately. The pattern and relative proportion of the soils are somewhat similar. Daleville-Jena association, frequently flooded, is an example.

Most map units include small scattered areas of soils other than those for which the map unit is named. Some of these included soils have properties that differ substantially from those of the major soil or soils. Such differences could significantly affect use and management of the soils in the map unit. The included soils are identified in each map unit description. Some small areas of strongly contrasting soils are identified by a special symbol on the soil maps.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits-Udorthents complex is an example. Miscellaneous areas are shown on the soil maps. Some that are too small to be shown are identified by a special symbol on the soil maps.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Summary of 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.

Bb—Bibb sandy loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Nearly level areas and depressions
Slope range: 0 to 2 percent
Flooding: Occasional for long periods from December through May
Ponding: None
Shape of areas: Long and narrow
Size of areas: 5 to 100 acres
Major land uses: Woodland, pasture

Composition

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

Soil Properties and Qualities

Drainage class: Poorly drained

Permeability: Moderate
Parent material: Stratified loamy alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 0.5 to 1.0 foot from December through April
Erosion hazard: Slight
Tilth: Good over a wide range of moisture content
Shrink-swell potential: Low

Typical Profile

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

Underlying material:
4 to 35 inches—light brownish gray loam that has strong brown mottles
35 to 70 inches—light gray loam that has strong brown mottles

Inclusions

Dissimilar inclusions:
- The moderately well drained Kirkville soils in slightly higher, more convex landscape positions
- The moderately well drained Mooreville soils in slightly higher, more convex landscape positions
- The somewhat poorly drained Mantachie soils in slightly higher, more convex landscape positions

Similar inclusions:
- The poorly drained Kinston soils in similar landscape positions

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and shallow field ditches help to remove excess surface water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Moderately suited
Major concerns: Equipment limitation, seedling mortality, plant competition
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 11W

BeB2—Binnsville-Demopolis complex, 2 to 5 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Gently sloping ridgetops
Slope range: 2 to 5 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 200 acres
Major land uses: Pasture and hay

Composition

Binnsville and similar soils: 55 percent
Demopolis and similar soils: 30 percent
Included soils: 15 percent

Soil Properties and Qualities

Binnsville

Drainage class: Well drained
Permeability: Slow
Parent material: Material weathered from Selma Chalk
Runoff: Medium
Available water capacity: Low

Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: This soil dries slowly after heavy rains, and the surface tends to form clods if worked when too wet.
Shrink-swell potential: Moderate

Demopolis

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Material weathered from Selma Chalk
Runoff: Medium
Available water capacity: Low
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: This soil dries slowly after heavy rains, and the surface tends to form clods if worked when too wet.
Shrink-swell potential: Moderate in the surface layer, low in the lower part of the profile

Typical Profile

Binnsville

Surface layer:
0 to 6 inches—very dark gray silty clay loam
6 to 12 inches—very dark grayish brown silty clay loam

Underlying material:
12 to 30 inches—very firm, light gray chalk that has yellow splotches and streaks

Demopolis

Surface layer:
0 to 4 inches—dark grayish brown silty clay loam

Underlying material:
4 to 10 inches—dark grayish brown extremely channery silty clay loam
10 to 40 inches—light gray chalk that has yellow splotches and streaks

Inclusions

Dissimilar inclusions:
- The well drained Okolona and Sumter soils in similar landscape positions
- Areas of rock outcrop

Similar inclusions:
- Areas of soils that have bedrock within a depth of 10 inches

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Erosion, alkalinity
Management measures:
- Management practices, such as conservation tillage, crop residue management, contour farming, contour stripcropping, and a crop rotation system that includes grasses and legumes, reduce the runoff rate and help to control erosion.

Pasture and hay

Suitability: Moderately suited
Major concerns: Erosion, alkalinity
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Poorly suited
Major concerns: Plant competition, seedling mortality
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Poorly suited
Major concerns: Depth to bedrock, shrink-swell potential
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Depth to bedrock
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 3D

Cp—Catalpa silty clay loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Flats and depressions
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from December through April
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land uses: Row crops, pasture

Composition

Catalpa and similar soils: 80 percent

Dissimilar soils: 20 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 2.0 feet from February through March
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry. If the soil is tilled when too wet or too dry, clods tend to form. The optimum range of moisture content for tilling the soil is narrow. The soil shrinks and cracks during dry periods.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 7 inches—very dark grayish brown silty clay loam that has dark grayish brown mottles
7 to 22 inches—very dark gray clay

Subsoil:
22 to 35 inches—dark grayish brown clay that has dark gray mottles
35 to 48 inches—dark grayish brown clay that has yellowish brown and olive brown mottles
48 to 64 inches—mottled gray and yellowish brown clay

Inclusions

Similar inclusions:
- Areas of soils that have a surface layer of silty clay

Dissimilar inclusions:
- The lighter colored Leeper soils in slightly lower landscape positions

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concerns: Flooding, shrink-swell potential
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding, slow permeability
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 11W

Da—Daleville sandy loam, frequently flooded

Setting

Landform: Terraces
Landform position: Flats and depressions
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from November through May
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

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

Soil Properties and Qualities

Drainage class: Poorly drained
Permeability: Slow
Parent material: Loamy coastal plain sediments
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through May
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsurface layer:
4 to 7 inches—mottled brown and gray sandy loam

Subsoil:
7 to 24 inches—light brownish gray loam that has brown mottles
24 to 56 inches—light brownish gray clay loam that has brown mottles
56 to 60 inches—light brownish gray loam that has brown mottles

Inclusions

Dissimilar inclusions:
- The well drained Jena soils on flood plains
- The moderately well drained Mooreville soils on flood plains

Similar inclusions:
- The poorly drained Kinston soils on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Moderately suited
Major concern: Wetness
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Moderately suited
Major concerns: Plant competition, seedling mortality, wetness, flooding
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding, slow permeability
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: Vw
Woodland ordination symbol: 10W

DJ—Daleville-Jena association, frequently flooded

Setting

Landform: Terraces and flood plains
Landform position: Jena—natural levees and the higher parts of flood plains; Daleville—flats and depressions
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from November through May (fig. 3)
Ponding: None
Shape of areas: Long and narrow
Size of areas: 160 to 800 acres
Major land use: Woodland

Figure 3.—An inundated area of Daleville-Jena association, frequently flooded.

Composition

Daleville and similar soils: 45 percent
Jena and similar soils: 30 percent
Included soils: 25 percent

Soil Properties and Qualities

Daleville

Drainage class: Poorly drained
Permeability: Slow
Parent material: Loamy coastal plain sediments
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through May
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Jena

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy alluvium
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Slight
Tilth: Surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Daleville

Surface layer:
0 to 4 inches—dark grayish brown sandy loam that has dark yellowish brown and light brownish gray mottles

Subsurface layer:
4 to 9 inches—grayish brown sandy loam that has dark yellowish brown mottles

Subsoil:
9 to 18 inches—grayish brown sandy clay loam that has yellowish brown mottles
18 to 52 inches—light brownish gray sandy clay loam that has strong brown mottles
52 to 70 inches—grayish brown sandy clay loam that has strong brown mottles

Jena

Surface layer:
0 to 7 inches—dark brown fine sandy loam

Subsoil:
7 to 44 inches—dark brown, dark yellowish brown, or yellowish brown loam

Underlying material:
44 to 60 inches—yellowish brown sandy loam

Inclusions

Similar inclusions:
- Kinston, Kirkville, and Mantachie soils on flood plains

Dissimilar inclusions:
- The poorly drained Bibb soils in lower landscape positions

Use and Management

Cropland

Suitability: Poorly suited
Major concern: Flooding
Management measures:
- The seasonal high water table delays planting in some years in areas of the Daleville soil. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Jena—moderately suited; Daleville—poorly suited
Major concerns: Flooding in all areas, wetness in areas of Daleville soils
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Moderately suited
Major concerns: Wetness, flooding, plant competition, seedling mortality
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness and flooding.
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Flooding
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: Vw
Woodland ordination symbol: Daleville—10W; Jena—11W

DmD3—Demopolis-Rock outcrop, chalk complex, 5 to 12 percent slopes, severely eroded

Setting

Landform: Uplands
Landform position: Side slopes
Slope range: 5 to 12 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 80 acres
Major land use: Pasture

Composition

Demopolis and similar soils: 43 percent
Rock outcrop, chalk, and similar areas: 37 percent
Included soils: 20 percent

Soil Properties and Qualities

Demopolis

Drainage class: Well drained
Permeability: Moderately slow

Parent material: Chalk
Runoff: Rapid
Available water capacity: Low
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: This soil dries slowly after heavy rains, and the surface tends to form clods if worked too wet.
Shrink-swell potential: Moderate

Typical Profile

Demopolis

Surface layer:
0 to 4 inches—dark grayish brown silty clay loam

Underlying material:
4 to 14 inches—pale brown and dark grayish brown extremely channery silty clay loam
14 to 40 inches—light gray chalk that has yellow splotches and streaks

Rock outcrop

Rock outcrop, chalk, consists of level-bedded, platy soft chalk .

Inclusions

Dissimilar inclusions:
- Areas of alluvial soils on flood plains

Similar inclusions:
- The well drained Binnsville soils on ridges
- The well drained Sumter soils on ridges and side slopes

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Erosion, alkalinity
Management measures:
- A cover of permanent vegetation reduces the hazard of erosion.
- Management practices, such as conservation tillage, crop residue management, contour farming, contour stripcropping, and a crop rotation system that includes grasses and legumes, reduce the runoff rate and help to control erosion.

Pasture and hay

Suitability: Poorly suited
Major concerns: Erosion, alkalinity
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Poorly suited
Major concerns: Seedling mortality, plant competition
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Poorly suited
Major concerns: Depth to bedrock, slope
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Depth to bedrock, slope
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: Demopolis—VIe; Rock outcrop—not assigned
Woodland ordination symbol: Demopolis—3D; Rock outcrop—not assigned

FrA—Freest sandy loam, 0 to 2 percent slopes

Setting

Landform: Uplands
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

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

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Slow
Parent material: Loamy and clayey sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Within a depth of 1.5 to 2.5 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 5 inches—brown sandy loam that has pale brown mottles

Subsurface layer:
5 to 9 inches—pale brown sandy loam that has light brownish gray and yellowish brown mottles

Subsoil:
9 to 23 inches—mottled yellowish brown and pale brown loam
23 to 35 inches—mottled yellowish brown and light brownish gray clay loam
35 to 45 inches—mottled light brownish gray, red, and yellowish brown clay loam
45 to 66 inches—mottled light brownish gray, yellowish brown, and pale brown clay loam

Inclusions

Dissimilar inclusions:
- The somewhat poorly drained Kipling soils on uplands

Similar inclusions:
- The moderately well drained Savannah soils on terraces

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- Enlarging the size of the filter field helps to overcome the slow permeability.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 9W

FrB2—Freest sandy loam, 2 to 5 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

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

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Slow
Parent material: Loamy and clayey sediments
Runoff: Medium
Available water capacity: Moderate
Seasonal high water table: Within a depth of 1.5 to 2.5 feet from January through April
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 5 inches—brown sandy loam that has pale brown mottles

Subsurface layer:
5 to 9 inches—pale brown sandy loam that has light brownish gray and yellowish brown mottles

Subsoil:
9 to 23 inches—mottled yellowish brown, pale brown, and light brownish gray loam
23 to 35 inches—mottled yellowish brown and light brownish gray clay loam
35 to 45 inches—mottled light brownish gray, red, and yellowish brown clay loam
45 to 66 inches—mottled light brownish gray, yellowish brown, and pale brown clay loam

Inclusions

Dissimilar inclusions:
- The somewhat poorly drained Kipling soils on uplands

Similar inclusions:
- The moderately well drained Savannah soils on terraces

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
- Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Plant competition, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- Enlarging the size of the filter field helps to overcome the slow permeability.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9W

Ho—Houlka silty clay loam, frequently flooded

Setting

Landform: Flood plains
Landform position: Nearly level and depressional areas
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from January through March
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

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

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 to 2.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer tends to crust. A plowpan forms if the soil is tilled when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 3 inches—dark grayish brown silty clay loam
3 to 11 inches—dark brown silty clay that has light brownish gray mottles

Subsoil:
11 to 21 inches—light brownish gray silty clay loam that has strong brown mottles
21 to 31 inches—light brownish gray silty clay that has yellowish brown mottles
31 to 51 inches—light brownish gray clay that has strong brown mottles
51 to 69 inches—grayish brown clay that has yellowish brown mottles
69 to 81 inches—grayish brown clay that has strong brown mottles

Inclusions

Dissimilar inclusions:
- The poorly drained, loamy Kinston soils on flood plains

Similar inclusions:
- The somewhat poorly drained Catalpa soils on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Moderately suited
Major concern: Wetness
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Moderately suited
Major concerns: Wetness, flooding, plant competition, seedling mortality
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding, shrink-swell potential
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding, slow permeability
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IVw
Woodland ordination symbol: 11W

Je—Jena fine sandy loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Slightly convex natural levees
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from December through April
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land uses: Woodland, pasture (fig. 4)

Composition

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

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy alluvium
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Slight
Tilth: The surface layer is friable and easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Figure 4.—Coastal bermudagrass in an area of Jena fine sandy loam, occasionally flooded.

Subsoil:
6 to 12 inches—yellowish brown fine sandy loam
12 to 25 inches—brown fine sandy loam
25 to 39 inches—yellowish brown fine sandy loam that has dark yellowish brown mottles

Underlying material:
39 to 65 inches—yellowish brown loamy fine sand that has dark yellowish brown and pale brown mottles

Inclusions

Dissimilar inclusions:
- The poorly drained Bibb and Kinston soils in lower areas on flood plains
- The poorly drained Daleville soils on terraces
- The somewhat poorly drained Mantachie soils in lower areas on flood plains

Similar inclusions:
- The moderately well drained Kirkville and Mooreville soils in nearly level areas on flood plains

Use and Management

Cropland

Suitability: Well suited
Major concern: Flooding
Management measures:
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Well suited
Major concern: Flooding

Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Flooding
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 11A

Kn—Kinston loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Flats and depressions
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from November through June
Ponding: None
Shape of areas: Long and narrow
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

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

Soil Properties and Qualities

Drainage class: Poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through June
Erosion hazard: Slight
Tilth: Good over a wide range of moisture content
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 12 inches—gray loam that has strong brown and light gray mottles

Underlying material:
12 to 50 inches—gray clay loam that has brownish yellow and strong brown mottles
50 to 60 inches—gray loamy sand

Inclusions

Dissimilar inclusions:
• The well drained Jena soils in higher, convex areas
• The moderately well drained Mooreville soils in higher, nearly level areas
Similar inclusions:
• The somewhat poorly drained Mantachie soils in similar landscape positions

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
• The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
• Tilling when the soil is too wet causes surface cloddiness and compaction.
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
• Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited

Major concerns: Seedling mortality, equipment limitation, plant competition
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: VIw
Woodland ordination symbol: 9W

KpA—Kipling silty clay loam, 0 to 2 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land uses: Row crops, pasture

Composition

Kipling and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey sediments
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: Very high

Typical Profile

Surface layer:
0 to 6 inches—mottled dark brown, dark grayish brown, and yellowish brown silty clay loam

Subsoil:
6 to 14 inches—yellowish brown silty clay that has light brownish gray and red mottles
14 to 22 inches—mottled yellowish brown, light brownish gray, and red silty clay
22 to 33 inches—mottled light olive gray, red, and yellowish brown silty clay
33 to 44 inches—mottled red, gray, and yellowish brown silty clay
44 to 63 inches—yellowish brown clay that has light brownish gray mottles

Underlying material:
63 to 80 inches—firm chalk

Inclusions

Dissimilar inclusions:
• The moderately well drained, loamy Freest soils on uplands
• The well drained Binnsville soils that are shallow over chalk and are on uplands
Similar inclusions:
• The moderately well drained Oktibbeha soils on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
• Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
• Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation

Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 9C

KpB2—Kipling silty clay loam, 2 to 5 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Gently sloping ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land uses: Pasture (fig. 5), row crops

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey sediments
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Moderate
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: Very high

Typical Profile

Surface layer:
0 to 6 inches—mottled dark brown, dark grayish brown, and yellowish brown silty clay loam

Subsoil:
6 to 14 inches—yellowish brown silty clay that has light brownish gray and red mottles
14 to 22 inches—mottled yellowish brown, light brownish gray, and red silty clay
22 to 33 inches—mottled light olive gray, red, and yellowish brown silty clay
33 to 44 inches—mottled red, gray, and yellowish brown silty clay
44 to 63 inches—yellowish brown clay that has light brownish gray mottles

Underlying material:
63 to 80 inches—firm chalk

Inclusions

Dissimilar inclusions:
• The moderately well drained, loamy Freest soils on uplands
• The well drained Binnsville soils that are shallow over chalk and are on uplands
Similar inclusions:
• The moderately well drained Oktibbeha soils on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
• Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Figure 5.—Ryegrass in an area of Kipling silty clay loam, 2 to 5 percent slopes, eroded.

• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 9C

Kr—Kirkville loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Broad flats
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from January through April

Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land uses: Pasture, row crops

Composition

Kirkville and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Within a depth of 1.5 to 2.5 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 7 inches—brown loam

Subsoil:
7 to 11 inches—dark yellowish brown loam that has dark brown mottles
11 to 31 inches—yellowish brown loam that has light brownish gray mottles
31 to 65 inches—mottled brown, light brownish gray, yellowish brown, and strong brown loam

Inclusions

Dissimilar inclusions:
• The poorly drained Bibb and Kinston soils in lower areas on flood plains
Similar inclusions:
• The well drained Jena soils in higher, convex areas on flood plains
• The moderately well drained Mooreville soils on flood plains
• The somewhat poorly drained Mantachie soils on flood plains

Use and Management

Cropland

Suitability: Moderately suited
Major concern: Flooding
Management measures:
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
• Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Moderately suited
Major concern: Flooding
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 10W

Kv—Kirkville loam, frequently flooded

Setting

Landform: Flood plains
Landform position: Broad flats
Slope range: 0 to 2 percent
Flooding: Frequent for long periods from January through April
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

Kirkville and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Within a depth of 1.5 to 2.5 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsoil:
4 to 16 inches—dark yellowish brown loam that has yellowish brown and light brownish gray mottles
16 to 48 inches—mottled gray and brown loam
48 to 65 inches—light brownish gray loam that has brown mottles

Inclusions

Dissimilar inclusions:
- The poorly drained Daleville soils in lower areas on flood plains

Similar inclusions:
- The moderately well drained Mooreville soils on flood plains
- The somewhat poorly drained Mantachie soils on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concern: Flooding
Management measures:
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Poorly suited
Major concern: Flooding
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Moderately suited
Major concerns: Seedling mortality, plant competition, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: Vw
Woodland ordination symbol: 10W

Le—Leeper clay loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Flats and depressions
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from January through March
Ponding: None
Shape of areas: Long and narrow
Size of areas: 5 to 100 acres
Major land use: Row crops

Composition

Leeper and similar soils: 90 percent
Included soils: 10 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 to 2.0 feet from January through March

Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet or too dry. The soil shrinks and cracks during dry periods.
Shrink-swell potential: High

Typical Profile

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

Subsoil:
4 to 13 inches—dark grayish brown clay
13 to 29 inches—dark grayish brown silty clay loam that has olive brown mottles
29 to 49 inches—dark grayish brown clay loam that has olive brown mottles
49 to 72 inches—mottled gray and yellowish brown silty clay

Inclusions

Similar inclusions:
- The somewhat poorly drained Catalpa soils in similar landscape positions
- Areas of soils that have a surface layer of silty clay loam

Dissimilar inclusions:
- Brownish soils that do not have gray mottles within a depth of 30 inches

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Well suited
Major concerns: Wetness, flooding
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited
Major concerns: Seedling mortality, plant competition, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding, high shrink-swell potential
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding, very slow permeability
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 11W

Ma—Mantachie loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Broad flats
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from January through March
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

Mantachie and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 to 1.5 feet from December through March

Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 8 inches—brown loam

Subsoil:
8 to 16 inches—mottled grayish brown and yellowish brown loam
16 to 48 inches—light brownish gray loam that has yellowish brown mottles
48 to 61 inches—light brownish gray loam that has yellowish brown and strong brown mottles

Inclusions

Dissimilar inclusions:
- The well drained Jena soils in higher, convex areas on flood plains

Similar inclusions:
- The poorly drained Kinston soils on flood plains
- The moderately well drained Mooreville soils on flood plains

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 10W

Mc—Mantachie loam, frequently flooded

Setting

Landform: Flood plains
Landform position: Broad flats
Slope range: 0 to 2 percent
Flooding: Frequent for long periods from January through March
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

Mantachie and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 to 1.5 feet from December through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 8 inches—brown loam

Subsoil:
8 to 16 inches—mottled grayish brown and yellowish brown loam
16 to 48 inches—light brownish gray loam that has yellowish brown mottles
48 to 61 inches—light brownish gray loam that has yellowish brown and strong brown mottles

Inclusions

Dissimilar inclusions:
• The well drained Jena soils in higher, convex areas on flood plains
Similar inclusions:
• The poorly drained Kinston soils on flood plains
• The moderately well drained Mooreville soils on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
• Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Moderately suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: Vw
Woodland ordination symbol: 10W

MeA—Mayhew silt loam, 0 to 2 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Mayhew and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Poorly drained
Permeability: Very slow
Parent material: Acid clayey sediments over clay shale
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from January through March
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when it is too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 3 inches—very dark grayish brown silt loam
3 to 7 inches—dark grayish brown silty clay loam

Subsoil:
7 to 13 inches—light brownish gray silty clay loam that has yellowish brown mottles
13 to 31 inches—light brownish gray silty clay that has yellowish brown mottles
31 to 40 inches—grayish brown silty clay that has yellowish brown mottles

40 to 62 inches—grayish brown silty clay

Inclusions

Similar inclusions:
- The somewhat poorly drained Wilcox soils in higher areas on uplands

Dissimilar inclusions:
- Areas of soils that have less clay in the subsoil

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Wetness, tilth
Management measures:
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Moderately suited
Major concern: Wetness
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited
Major concerns: Plant competition, wetness, seedling mortality
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concerns: Shrink-swell potential, wetness
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 9W

Mo—Mooreville loam, occasionally flooded

Setting

Landform: Flood plains
Landform position: Nearly level or undulating areas
Slope range: 0 to 2 percent
Flooding: Occasional for brief periods from January through March
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

Mooreville and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsurface layer:
3 to 10 inches—dark brown loam that has pale brown mottles

Subsoil:
10 to 31 inches—yellowish brown loam that has light brownish gray mottles
31 to 43 inches—mottled light brownish gray and yellowish brown loam
43 to 60 inches—mottled light brownish gray and yellowish brown sandy clay loam

Inclusions

Dissimilar inclusions:
- The poorly drained Kinston soils on flood plains

Similar inclusions:
- The well drained Jena soils on flood plains
- The somewhat poorly drained Mantachie soils on flood plains

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 10A

Mr—Mooreville loam, frequently flooded

Setting

Landform: Flood plains
Landform position: Nearly level or undulating areas
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from January through March
Ponding: None
Shape of areas: Irregular
Size of areas: 5 to 100 acres
Major land use: Woodland

Composition

Mooreville and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

Surface layer:
0 to 4 inches—dark brown loam

Subsoil:
4 to 9 inches—mottled light brownish gray, pale brown, and yellowish brown loam
9 to 28 inches—light brownish gray loam that has brownish mottles
28 to 61 inches—gray clay loam that has brown mottles

Inclusions

Dissimilar inclusions:
- The poorly drained Kinston soils on flood plains

Similar inclusions:
- The well drained Jena soils on flood plains
- The somewhat poorly drained Mantachie soils on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.
• Proper row arrangement and surface field ditches help to remove excess surface water

Pasture and hay

Suitability: Moderately suited
Major concerns: Wetness, flooding
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.
• Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Unsuited
Major concern: Flooding
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Flooding, wetness
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: Vw
Woodland ordination symbol: 10W

MV—Mooreville-Kinston-Mantachie association, frequently flooded

Setting

Landform: Flood plains
Landform position: Ridges and swales
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from November through June
Ponding: None
Shape of areas: Irregular
Size of areas: 300 to more than 1,000 acres
Major land use: Woodland

Composition

Mooreville and similar soils: 37 percent
Kinston and similar soils: 29 percent
Mantachie and similar soils: 24 percent
Included soils: 10 percent

Soil Properties and Qualities

Mooreville

Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Kinston

Drainage class: Poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through June
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Mantachie

Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Alluvium

Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 and 1.5 feet from December through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Mooreville

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

Subsurface layer:
3 to 10 inches—dark brown loam that has pale brown mottles

Subsoil:
10 to 31 inches—yellowish brown loam that has light brownish gray mottles
31 to 43 inches—mottled light brownish gray and yellowish brown loam
43 to 60 inches—yellowish brown sandy clay loam

Kinston

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 12 inches—gray loam that has strong brown and light gray mottles

Underlying material:
12 to 50 inches—gray clay loam that has strong brown and brownish yellow mottles
50 to 60 inches—gray loamy sand

Mantachie

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

Subsoil:
8 to 16 inches—mottled light brownish gray and yellowish brown loam
16 to 48 inches—light brownish gray loam that has yellowish brown mottles
48 to 61 inches—light brownish gray loam that has yellowish brown and strong brown mottles

Inclusions

Similar inclusions:
- Daleville and Quitman soils on flood plains

Dissimilar inclusions:
- Rarely flooded areas of Jena soils on natural levees

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is too wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Poorly suited
Major concern: Wetness
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, flooding, plant competition, seedling mortality
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: Mooreville and Mantachie—Vw; Kinston—VIw
Woodland ordination symbol: Kinston—9W; Mooreville and Mantachie—10W

OaA—Okolona silty clay, 1 to 3 percent slopes

Setting

Landform: Uplands
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

Okolona and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Very slow
Parent material: Calcareous clayey material that is underlain by marly clay and chalk
Runoff: Medium
Available water capacity: High
Seasonal high water table: Within a depth of 4.0 to 6.0 feet from January through March
Erosion hazard: Moderate
Tilth: The surface layer is sticky when wet and hard when dry. If tilled when the soil is too wet, clods tend to form. The soil shrinks and cracks during dry periods.
Shrink-swell potential: Very high

Typical Profile

Surface layer:
0 to 5 inches—very dark grayish brown silty clay
5 to 19 inches—very dark grayish brown clay

Subsoil:
19 to 29 inches—dark grayish brown clay that has yellowish brown mottles
29 to 43 inches—mottled yellowish brown, dark grayish brown, and olive brown clay
43 to 65 inches—mottled dark grayish brown, light olive brown, and yellowish brown clay

Inclusions

Dissimilar inclusions:
• The somewhat poorly drained Kipling soils in similar landscape positions
Similar inclusions:
• The well drained Binnsville and Sumter soils in similar landscape positions

Use and Management

Cropland

Suitability: Moderately suited
Major concerns: Erosion, tilth
Management measures:
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
• Management practices, such as conservation tillage, grassed waterways, crop residue management, contour farming, and a crop rotation system that includes grasses and legumes, help to control erosion.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Moderately suited
Major concern: Seedling mortality
Management measures:
• Selecting tree species that are tolerant of the alkaline soil conditions decreases the seedling mortality rate.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the very high shrink-swell potential.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Very slow permeability
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 3C

ObC3—Oktibbeha silty clay loam, 5 to 8 percent slopes, severely eroded

Setting

Landform: Uplands

Landform position: Hillsides
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land uses: Row crops, pasture

Composition

Oktibbeha and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Beds of acid clay overlying marly clay or chalk
Runoff: Medium
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: Moderate in the surface layer, high in the subsoil and underlying material

Typical Profile

Surface layer:
0 to 5 inches—dark brown silty clay loam

Subsoil:
5 to 12 inches—yellowish red clay that has yellowish brown mottles
12 to 17 inches—yellowish red clay that has yellowish brown and light brownish gray mottles
17 to 28 inches—mottled yellowish brown, yellowish red, and light brownish gray clay
28 to 44 inches—strong brown clay that has yellowish brown, yellowish red, and light brownish gray mottles
44 to 57 inches—yellowish brown clay that has light brownish gray mottles
57 to 70 inches—yellowish brown clay that has olive brown and olive gray mottles

Inclusions

Similar inclusions:
• The somewhat poorly drained Kipling soils on uplands
Dissimilar inclusions:
• The shallow Binnsville and Demopolis soils in similar landscape positions

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Erosion, tilth
Management measures:
• Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.
• Crop residue management improves tilth and reduces crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
• Gullies should be smoothed and shaped to facilitate mowing.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, erosion
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concern: Slow permeability
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 7C

ObD3—Oktibbeha silty clay loam, 8 to 12 percent slopes, severely eroded

Setting

Landform: Uplands
Landform position: Hillsides
Flooding: None

Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land uses: Pasture, woodland

Composition

Oktibbeha and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Beds of acid clay overlying marly clay or chalk
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: Moderate in the surface layer, high in the subsoil and underlying material

Typical Profile

Surface layer:
0 to 2 inches—dark brown silty clay loam mixed with a small amount of subsoil material

Subsoil:
2 to 12 inches—red clay
12 to 38 inches—red clay that has light yellowish brown and light brownish gray mottles
38 to 46 inches—light yellowish brown clay that has yellowish red and light brownish gray mottles
46 to 60 inches—light yellowish brown marly clay that has light brownish gray and yellowish red mottles

Inclusions

Similar inclusions:
- The well drained, moderately deep Sumter soils on uplands
- The somewhat poorly drained Kipling soils on uplands
- Areas of soils that have slopes of less than 8 percent

Dissimilar inclusions:
- The shallow Demopolis soils in similar landscape positions

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Slope, erosion
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Gullies should be smoothed and shaped to facilitate mowing.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, erosion
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.
- Mechanical cultivation can help to control the growth of undesirable plants.
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.

Septic tank absorption fields

Suitability: Poorly suited
Major concern: Slow permeability
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 7C

OrB2—Ora fine sandy loam, 2 to 5 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Figure 6.—Corn in an area of Ora fine sandy loam, 2 to 5 percent slopes, eroded, and cucumbers in an area of Jena fine sandy loam, occasionally flooded.

Major land use: Row crops (fig. 6)

Composition

Ora and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy marine sediments
Runoff: Medium
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 2.0 to 3.5 feet from February through April
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
5 to 22 inches—yellowish red loam
22 to 36 inches—yellowish red loam fragipan that has reddish yellow mottles
36 to 56 inches—mottled yellowish red, strong brown, and light brownish gray loam fragipan
Underlying material:
56 to 65 inches—mottled yellowish red, strong brown, and light brownish gray loam

Inclusions

Similar inclusions:
- The moderately well drained Savannah soils in similar positions on uplands

Dissimilar inclusions:
- The well drained Sweatman soils in similar positions on uplands
- The well drained Ruston soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
- Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
- Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
- Special designs or an alternative system help to overcome the problems associated with wetness and moderately slow permeability.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8W

OrC2—Ora fine sandy loam, 5 to 8 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Ridgetops and side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Pasture

Composition

Ora and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy marine sediments
Runoff: Medium
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 2.0 to 3.5 feet from February through April
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 7 inches—yellowish brown fine sandy loam

Subsoil:
7 to 21 inches—yellowish red loam grading to sandy clay loam in the lower part
21 to 33 inches—firm fragipan that is yellowish red loam and has light yellowish brown mottles
33 to 50 inches—firm fragipan that is mottled dark red, yellowish red, and pale brown loam
50 to 68 inches—firm fragipan that is mottled dark red, yellowish red, and light brownish gray sandy clay loam

Inclusions

Similar inclusions:
- The moderately well drained Savannah soils in similar positions on uplands

Dissimilar inclusions:
- The well drained Sweatman soils in similar positions on uplands

• The well drained Ruston soils in similar positions on uplands

Use and Management

Cropland

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• Special designs or an alternative system help to overcome the problems associated with wetness and moderately slow permeability.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8W

OrD2—Ora fine sandy loam, 8 to 12 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Ora and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 2.0 to 3.5 feet from February through April
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 7 inches—yellowish brown fine sandy loam

Subsoil:
7 to 12 inches—yellowish red loam
12 to 21 inches—yellowish red sandy clay loam
21 to 33 inches—firm, compact, and brittle fragipan that is yellowish red loam and has yellowish brown mottles
33 to 50 inches—firm, compact, and brittle fragipan that is mottled dark red, yellowish red, and pale brown loam
50 to 68 inches—firm, compact, and brittle fragipan that is mottled dark red, yellowish red, and light brownish gray sandy clay loam

Inclusions

Similar inclusions:
• The moderately well drained Savannah soils in similar positions on uplands
Dissimilar inclusions:
• The well drained Sweatman soils in similar positions on uplands
• The well drained Ruston soils in similar positions on uplands

Use and Management

Cropland

Suitability: Poorly suited
Major concern: Erosion

Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Poorly suited
Major concerns: Wetness, slope
Management measures:
• Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• Special designs or an alternative system help to overcome the problems associated with wetness and moderately slow permeability.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8W

Pe—Pits-Udorthents complex

Setting

Landform: Uplands
Landform position: Ridgetops and hillsides
Flooding: None
Ponding: In the bottom of some excavations
Shape of areas: Irregular
Size of areas: 5 to 15 acres
Major land use: Recreation

Composition

Pits and similar areas: 60 percent
Udorthents and similar areas: 25 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Not assigned
Permeability: Variable
Parent material: Variable
Runoff: Slow to rapid
Available water capacity: Variable
Seasonal high water table: Variable
Erosion hazard: Slight to severe
Tilth: Variable
Shrink-swell potential: Variable

Inclusions

Dissimilar inclusions:
• Areas of ponded water in the bottom of some excavations
• Areas of natural soils around the perimeter of the map unit

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Slope, tilth
Management measures:
• An alternative site should be selected.

Pasture and hay

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Woodland

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Dwellings

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: Not assigned
Woodland ordination symbol: Not assigned

PnA—Prentiss loam, 0 to 2 percent slopes

Setting

Landform: Uplands
Landform position: Broad flats and ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

Prentiss and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Parent material: Marine sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 2.0 to 2.5 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 6 inches—yellowish brown loam

Subsoil:
6 to 22 inches—yellowish brown loam
22 to 31 inches—compact and brittle fragipan that is yellowish brown loam and has strong brown and light brownish gray mottles
31 to 60 inches—compact and brittle fragipan that is mottled strong brown, light brownish gray, and yellowish red loam

Inclusions

Similar inclusions:
- The somewhat poorly drained Stough soils on uplands
- The moderately well drained Savannah soils on uplands

Dissimilar inclusions:
- The somewhat poorly drained Quitman soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
- Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
- Special designs or an alternative system help to overcome the problems associated with wetness and moderately slow permeability.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 9W

PnB—Prentiss loam, 2 to 5 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular

Size of areas: 10 to 100 acres
Major land uses: Pasture, row crops

Composition

Prentiss and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Parent material: Marine sediments
Runoff: Slow to medium
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 2.0 to 2.5 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 6 inches—yellowish brown loam

Subsoil:
6 to 22 inches—yellowish brown loam
22 to 31 inches—compact and brittle fragipan that is yellowish brown loam and has strong brown and light brownish gray mottles
31 to 60 inches—compact and brittle fragipan that is mottled strong brown, light brownish gray, and yellowish red loam

Inclusions

Similar inclusions:
• The moderately well drained Savannah soils in similar positions on uplands
Dissimilar inclusions:
• The somewhat poorly drained Quitman soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• Special designs or an alternative system help to overcome the problems associated with wetness and moderately slow permeability.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9W

QaA—Quitman silt loam, 0 to 2 percent slopes

Setting

Landform: Uplands and terraces
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 20 to 200 acres
Major land use: Pasture

Composition

Quitman and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Moderately slow

Parent material: Loamy marine sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.5 to 2.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content. Some crusting and packing occurs after hard rains.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 2 inches—dark brown silt loam

Subsurface layer:
2 to 7 inches—mottled dark brown and pale brown silt loam

Subsoil:
7 to 20 inches—yellowish brown loam that has light brownish gray and pale brown mottles
20 to 47 inches—mottled yellowish brown, light brownish gray, and strong brown loam
47 to 67 inches—mottled strong brown, yellowish brown, and light brownish gray clay loam

Inclusions

Similar inclusions:
• The somewhat poorly drained Stough soils on uplands and terraces
Dissimilar inclusions:
• The moderately well drained Prentiss soils in higher areas on uplands
• The moderately well drained Savannah soils in slightly higher areas on uplands and terraces

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
• The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
• Tilling when the soil is wet causes surface cloddiness and compaction.
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Special designs and engineering techniques and careful construction help to minimize the problems associated with wetness.
• Constructing on raised fill reduces the wetness limitation.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• A specially designed, alternative system can be considered, or an alternative site can be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 10W

QS—Quitman-Stough association, 0 to 3 percent slopes

Setting

Landform: Uplands and terraces
Landform position: Broad flats
Slope range: 0 to 3 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 160 to more than 1,000 acres
Major land use: Woodland

Composition

Quitman and similar soils: 46 percent
Stough and similar soils: 40 percent
Included soils: 14 percent

Soil Properties and Qualities

Quitman

Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.5 to 2.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content. Some crusting and packing occurs after hard rains.
Shrink-swell potential: Low

Stough

Drainage class: Somewhat poorly drained
Permeability: Moderate in the surface layer and upper part of the subsoil, moderately slow in the lower part of the subsoil
Parent material: Coastal plain sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.0 to 1.5 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Quitman

Surface layer:
0 to 2 inches—dark brown silt loam

Subsurface layer:
2 to 7 inches—mottled dark brown and pale brown silt loam

Subsoil:
7 to 20 inches—yellowish brown loam that has light brownish gray and pale brown mottles
20 to 47 inches—mottled yellowish brown, light brownish gray, and strong brown loam
47 to 67 inches—mottled strong brown, yellowish brown, and light brownish gray clay loam

Stough

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

Subsurface layer:
3 to 7 inches—brown fine sandy loam that has yellowish red mottles

Subsoil:
7 to 21 inches—yellowish brown fine sandy loam that has light brownish gray mottles
21 to 35 inches—fragipan that is mottled yellowish brown, pale brown, and light brownish gray fine sandy loam
35 to 55 inches—fragipan that is mottled pale brown, light brownish gray, and yellowish brown loam
55 to 65 inches—fragipan that is mottled yellowish brown and light brownish gray sandy clay loam

Inclusions

Dissimilar inclusions:
- The well drained Sweatman soils on uplands
- The somewhat poorly drained Urbo soils on flood plains
- The moderately well drained Savannah soils on uplands

Similar inclusions:
- Areas of soils that have slopes of more than 3 percent

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
- Tilling when the soil is wet causes surface cloddiness and compaction.
- Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Restricting grazing when the soil is too wet helps to reduce compaction.
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition
Management measures:
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
- Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Quitman—moderately suited; Stough—poorly suited
Major concern: Wetness

Management measures:
• Special designs and engineering techniques and careful construction help to overcome the problems associated with wetness.
• Constructing on raised fill reduces the wetness limitation.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• A specially designed, alternative system can be considered, or an alternative site can be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: Quitman—10W; Stough—9W

RA—Rosebloom-Arkabutla association, frequently flooded

Setting

Landform: Flood plains
Landform position: Arkabutla—ridges; Rosebloom—swales
Slope range: 0 to 2 percent
Flooding: Frequent for brief periods from January through April
Ponding: None
Shape of areas: Irregular
Size of areas: 160 to 1,000 acres
Major land use: Woodland

Composition

Rosebloom and similar soils: 52 percent
Arkabutla and similar soils: 37 percent
Included soils: 11 percent

Soil Properties and Qualities

Rosebloom

Drainage class: Poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Arkabutla

Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Alluvium
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 to 1.5 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Rosebloom

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

Subsoil:
7 to 26 inches—light brownish gray silt loam that has strong brown mottles
26 to 47 inches—light brownish gray silty clay loam that has strong brown mottles
47 to 60 inches—gray silty clay loam that has strong brown mottles

Arkabutla

Surface layer:
0 to 5 inches—dark brown silt loam that has light brownish gray mottles

Subsoil:
5 to 17 inches—mottled light brownish gray and yellowish brown silt loam
17 to 28 inches—light brownish gray silty clay loam that has yellowish brown mottles
28 to 60 inches—gray silty clay loam that has yellowish brown mottles

Inclusions

Similar inclusions:
• Kinston and Mantachie soils in similar positions on flood plains
• Areas of soils that are in landscape positions similar to those of the Rosebloom soils and have clay loam below a depth of 36 inches
Dissimilar inclusions:
• Houlka soils in similar positions on flood plains

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Wetness, flooding

Management measures:
• The seasonal high water table delays planting in some years. Proper row arrangement and surface field ditches help to remove excess water.
• Tilling when the soil is too wet causes surface cloddiness and compaction.
• Returning crop residue to the soil and regularly adding other organic material help to maintain tilth and fertility.

Pasture and hay

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Restricting grazing when the soil is too wet helps to reduce compaction.
• Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition, seedling mortality
Management measures:
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.

Dwellings

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Wetness, flooding
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: Rosebloom—Vw; Arkabutla—IVw
Woodland ordination symbol: Arkabutla—4W; Rosebloom—9W

RnB—Ruston fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

Ruston and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Runoff: Medium
Available water capacity: High
Seasonal high water table: Below a depth of 6.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
6 to 18 inches—yellowish red sandy clay loam
18 to 42 inches—yellowish red fine sandy loam
42 to 50 inches—yellowish red and yellowish brown sandy loam
50 to 60 inches—yellowish red sandy clay loam that has yellowish brown mottles
60 to 80 inches—yellowish red fine sandy loam that has strong brown and light gray mottles

Inclusions

Dissimilar inclusions:
• The moderately well drained Ora soils in similar positions on uplands
Similar inclusions:
• The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Figure 7.—Pasture in an area of Ruston fine sandy loam, 2 to 5 percent slopes. The background contains mixed hardwoods and pines in an area of Smithdale fine sandy loam, hilly, 8 to 35 percent slopes.

Pasture and hay

Suitability: Well suited (fig. 7)
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: None
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Well suited
Major concerns: None
Management measures:
• Establishing vegetation on the construction site and in adjacent areas reduces the hazard of erosion and the offsite sedimentation.

Septic tank absorption fields

Suitability: Well suited
Major concerns: None
Management measures:
• Properly designed and installed septic tank absorption fields will generally work satisfactorily in areas of this soil.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8A

Figure 8.—Bales of bahiagrass hay in an area of Ruston fine sandy loam, 5 to 8 percent slopes, eroded.

RnC2—Ruston fine sandy loam, 5 to 8 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Ridgetops and side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Pasture (fig. 8)

Composition

Ruston and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Runoff: Medium
Available water capacity: High
Seasonal high water table: Below a depth of 6.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
6 to 18 inches—yellowish red sandy clay loam
18 to 42 inches—yellowish red fine sandy loam
42 to 50 inches—yellowish red and yellowish brown sandy loam

50 to 60 inches—yellowish red sandy clay loam that has yellowish brown mottles
60 to 80 inches—yellowish red fine sandy loam that has strong brown and light gray mottles

Inclusions

Dissimilar inclusions:
• The moderately well drained Ora soils in similar positions on uplands
Similar inclusions:
• The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: None
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.

Dwellings

Suitability: Well suited
Major concerns: None
Management measures:
• Establishing vegetation on the construction site and in adjacent areas reduces the hazard of erosion and the offsite sedimentation.

Septic tank absorption fields

Suitability: Well suited
Major concerns: None
Management measures:
• Properly designed and installed septic tank absorption fields will generally work satisfactorily in areas of this soil.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8A

SaA—Savannah fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Uplands and terraces
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops (fig. 9)

Composition

Savannah and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the surface layer and upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy sediments
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsurface layer:
6 to 12 inches—brown fine sandy loam

Subsoil:
12 to 25 inches—yellowish brown sandy clay loam
25 to 47 inches—firm fragipan that is mottled yellowish brown and light brownish gray loam
47 to 60 inches—firm fragipan that is mottled yellowish brown, light brownish gray, and yellowish red sandy clay loam

Inclusions

Similar inclusions:
• The moderately well drained Ora soils in similar areas on uplands

Figure 9.—Soybeans in an area of Savannah fine sandy loam, 0 to 2 percent slopes.

• Areas of soils that have slopes of more than 2 percent

Dissimilar inclusions:

• The well drained Ruston soils in similar areas on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:

• Proper row arrangement and surface field ditches help remove excess surface water.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:

• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition
Management measures:

• Proper site preparation helps to control the growth of undesirable plants.
• Using special equipment and logging during the drier

seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Careful construction and special engineering techniques help to overcome the wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 8W

SaB—Savannah fine sandy loam, 2 to 5 percent slopes

Setting

Landform: Uplands and terraces
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

Savannah and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the surface layer and upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy sediments
Runoff: Slow to medium
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Slight
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsurface layer:
6 to 12 inches—brown fine sandy loam

Subsoil:
12 to 25 inches—yellowish brown sandy clay loam
25 to 47 inches—firm fragipan that is mottled yellowish brown and light brownish gray loam
47 to 60 inches—firm fragipan that is mottled yellowish brown, light brownish gray, and yellowish red sandy clay loam

Inclusions

Similar inclusions:
• The moderately well drained Ora soils in similar areas on uplands
Dissimilar inclusions:
• The well drained Ruston soils in similar areas on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, terraces, and grassed waterways decrease the runoff rate and reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Moderately suited

Major concern: Wetness
Management measures:
• Careful construction and special engineering techniques help to overcome the wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8W

SaC2—Savannah fine sandy loam, 5 to 8 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Row crops

Composition

Savannah and similar soils: 80 percent
Included soils: 20 percent

Soil Properties and Qualities

Drainage class: Moderately well drained
Permeability: Moderate in the surface layer and upper part of the subsoil, moderately slow in the fragipan
Parent material: Loamy sediments
Runoff: Medium
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.5 to 3.0 feet from January through March
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsurface layer:
6 to 12 inches—brown fine sandy loam

Subsoil:
12 to 25 inches—yellowish brown sandy clay loam
25 to 47 inches—firm fragipan that is mottled yellowish brown and light brownish gray loam
47 to 60 inches—firm fragipan that is mottled yellowish brown, light brownish gray, and yellowish red sandy clay loam

Inclusions

Similar inclusions:
• The moderately well drained Ora soils in similar positions on uplands
Dissimilar inclusions:
• The well drained Ruston soils in similar positions on uplands

Use and Management

Cropland

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, terraces, and grassed waterways decrease the runoff rate and reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Wetness, plant competition
Management measures:
• Proper site preparation helps to control the growth of undesirable plants.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Moderately suited
Major concern: Wetness
Management measures:
• Careful construction and special engineering techniques help to overcome the wetness.

Septic tank absorption fields

Suitability: Poorly suited

Figure 10.—Pasture in an area of Smithdale fine sandy loam, 8 to 12 percent slopes, eroded.

Major concerns: Wetness, moderately slow permeability
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8W

SeD2—Smithdale fine sandy loam, 8 to 12 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land uses: Pasture (fig. 10), woodland

Composition

Smithdale and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
6 to 20 inches—red sandy clay loam
20 to 36 inches—yellowish red sandy clay loam

36 to 80 inches—yellowish red sandy loam

Inclusions

Similar inclusions:
- The well drained Ruston soils in higher areas on uplands

Dissimilar inclusions:
- The moderately well drained Ora soils in higher areas on uplands

Use and Management

Cropland

Suitability: Poorly suited
Major concerns: Erosion, slope
Management measures:
- Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: None
Management measures:
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Moderately suited
Major concern: Slope
Management measures:
- Special designs and careful construction help to overcome the problems associated with slope.

Septic tank absorption fields

Suitability: Moderately suited
Major concern: Slope
Management measures:
- Installing tile lines on the contour helps to overcome the problems associated with slope.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8A

SeE2—Smithdale fine sandy loam, 12 to 17 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land use: Woodland

Composition

Smithdale and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
6 to 20 inches—red sandy clay loam
20 to 36 inches—yellowish red sandy clay loam
36 to 80 inches—yellowish red sandy loam

Inclusions

Similar inclusions:
- The well drained Ruston soils in higher areas on uplands

Dissimilar inclusions:
- The moderately well drained Ora soils in higher areas on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Erosion, slope
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited

Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Erosion
Management measures:
• Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Poorly suited
Major concern: Slope
Management measures:
• Special designs and careful construction help to overcome the problems associated with slope.
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concern: Slope
Management measures:
• Installing tile lines on the contour helps to overcome the problems associated with slope.
• A better suited site can be selected.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 8A

SeF—Smithdale fine sandy loam, 17 to 35 percent slopes

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land use: Woodland

Composition

Smithdale and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsoil:
6 to 20 inches—red sandy clay loam
20 to 36 inches—yellowish red sandy clay loam
36 to 80 inches—yellowish red sandy loam

Inclusions

Similar inclusions:
• The well drained Ruston soils in higher areas on uplands
Dissimilar inclusions:
• The moderate well drained Ora soils in higher areas on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Pasture and hay

Suitability: Poorly suited
Major concern: Slope
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Erosion, equipment limitation
Management measures:
• Locating logging roads on the contour reduces the hazard of erosion.
• Using special equipment minimizes the equipment limitation.

Dwellings

Suitability: Unsuited
Major concern: Slope
Management measures:
• An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited

Major concern: Slope
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: VIIe
Woodland ordination symbol: 8R

SL—Smithdale fine sandy loam, hilly, 8 to 35 percent slopes

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 100 to 500 acres
Major land use: Woodland

Composition

Smithdale and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Medium to very rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

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

Subsurface layer:
4 to 17 inches—yellowish brown fine sandy loam

Subsoil:
17 to 27 inches—red clay loam
27 to 32 inches—red sandy clay loam
32 to 65 inches—mottled red and brownish yellow sandy loam
65 to 80 inches—mottled strong brown, reddish brown, and red sandy loam

Inclusions

Similar inclusions:
• The well drained Ruston soils in higher areas on uplands

Dissimilar inclusions:
• The moderately well drained Ora soils in higher areas on uplands

Use and Management

Cropland

Suitability: Poorly suited in areas that have on slopes of less than 12 percent, unsuited in areas that have slopes of more than 12 percent
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Erosion hazard, equipment limitation
Management measures:
• Locating logging roads on the contour reduces the hazard of erosion.
• Using special equipment minimizes the equipment limitation.

Dwellings

Suitability: Moderate in areas that have slopes of less than 15 percent, poorly suited in areas that have slopes of more than 15 percent
Major concern: Slope
Management measures:
• Special designs and careful construction help to overcome the problems associated with slope.

Septic tank absorption fields

Suitability: Moderate in areas that have slopes of less than 15 percent, poorly suited in areas that have slopes of more than 15 percent
Major concern: Slope
Management measures:
• Installing tile lines on the contour helps to overcome the problems associated with slope.

Interpretive Groups

Land capability classification: VIIe
Woodland ordination symbol: 8R

SR—Smithdale-Ruston association, 5 to 15 percent slopes

Setting

Landform: Uplands
Landform position: Smithdale—side slopes; Ruston—ridgetops
Slope range: Smithdale—5 to 15 percent; Ruston—5 to 8 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 160 to 500 acres
Major land use: Woodland

Composition

Smithdale and similar soils: 43 percent
Ruston and similar soils: 27 percent
Included soils: 30 percent

Soil Properties and Qualities

Smithdale

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Ruston

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Smithdale

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

Subsurface layer:
4 to 11 inches—yellowish brown fine sandy loam

Subsoil:
11 to 56 inches—yellowish red sandy clay loam or loam
56 to 80 inches—yellowish red sandy loam that has strong brown mottles

Ruston

Surface layer:
0 to 7 inches—yellowish brown sandy loam

Subsoil:
7 to 29 inches—red loam
29 to 45 inches—red loam that has pockets of reddish yellow sandy loam
45 to 75 inches—red loam

Inclusions

Dissimilar inclusions:
- The well drained Jena soils on narrow flood plains
- The somewhat poorly drained Mantachie soils on narrow flood plains
- The moderately well drained Ora and Savannah soils in similar landscape positions

Similar inclusions:
- The well drained Sweatman soils on hillsides

Use and Management

Cropland

Suitability: Moderately suited in areas that have slopes of less than 8 percent, poorly suited in areas that have slopes of 8 percent or more
Major concern: Erosion
Management measures:
- Management practices, such as conservation tillage, terraces, grassed waterways, crop residue management, contour farming, contour stripcropping, and a crop rotation system that includes grasses and legumes, reduce the runoff rate and help to control erosion.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: None
Management measures:
- There are no significant limitations for managing or harvesting trees.

Dwellings

Suitability: Moderately suited

Major concern: Slope
Management measures:
• Careful site selection can minimize the problems associated with slope.

Septic tank absorption fields

Suitability: Moderately suited
Major concern: Slope
Management measures:
• Installing tile lines on the contour helps to overcome the problems associated with slope.

Interpretive Groups

Land capability classification: Smithdale—VIe; Ruston—IIIe
Woodland ordination symbol: 8A

SS—Smithdale-Ruston association, hilly

Setting

Landform: Uplands
Landform position: Smithdale—side slopes; Ruston—ridgetops
Slope range: Smithdale—5 to 40 percent; Ruston—5 to 8 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 160 to 1,000 acres
Major land use: Woodland

Composition

Smithdale and similar soils: 64 percent
Ruston and similar soils: 16 percent
Included soils: 20 percent

Soil Properties and Qualities

Smithdale

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy material
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Ruston

Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Smithdale

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

Subsoil:
6 to 20 inches—red sandy clay loam
20 to 36 inches—yellowish red sandy clay loam
36 to 80 inches—yellowish red sandy loam

Ruston

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

Subsurface layer:
6 to 12 inches—yellowish red sandy clay loam

Subsoil:
12 to 42 inches—yellowish red fine sandy loam
42 to 50 inches—yellowish red fine sandy loam that has pockets of light gray and strong brown fine sandy loam
50 to 60 inches—yellowish red sandy clay loam that has brown mottles
60 to 80 inches—yellowish red fine sandy loam that has brown and gray mottles

Inclusions

Dissimilar inclusions:
• The well drained Jena soils on narrow flood plains
Similar inclusions:
• The well drained Sweatman soils in similar areas on hillsides

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Slope, erosion
Management measures:
• An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited
Major concerns: Slope, erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush

control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Erosion, equipment limitation
Management measures:
• Logging roads should run parallel to the slope as much as possible.
• Using special equipment minimizes the equipment limitation.

Dwellings

Suitability: Poorly suited
Major concern: Slope
Management measures:
• Careful site selection can reduce the problems associated with slope.

Septic tank absorption fields

Suitability: Poorly suited
Major concern: Slope
Management measures:
• Installing tile lines on the contour helps to overcome the problems associated with slope.

Interpretive Groups

Land capability classification: Smithdale—VIIe; Ruston—IIIe
Woodland ordination symbol: Smithdale—8R; Ruston—8A

StA—Stough fine sandy loam, 0 to 2 percent slopes

Setting

Landform: Uplands and terraces
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Stough and similar soils: 85 percent (fig. 11)
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Parent material: Loamy material
Runoff: Slow
Available water capacity: Moderate
Seasonal high water table: Perched within a depth of 1.0 to 1.5 feet between January and April
Erosion hazard: Slight
Tilth: This soil is friable and can be worked throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Surface layer:
0 to 3 inches—dark grayish brown fine sandy loam
3 to 7 inches—brown fine sandy loam that has yellowish red mottles

Subsoil:
7 to 21 inches—yellowish brown fine sandy loam that has light brownish gray mottles
21 to 35 inches—mottled yellowish brown, pale brown, and light brownish gray fine sandy loam that is firm, compact, and brittle
35 to 55 inches—mottled pale brown, light brownish gray, and yellowish brown loam that is firm, compact, and brittle
55 to 65 inches—mottled yellowish brown, light brownish gray, and gray sandy clay loam that is firm, compact, and brittle

Inclusions

Similar inclusions:
• The moderately well drained Prentiss and Savannah soils in similar landscape positions
• The somewhat poorly drained Quitman soils in similar landscape positions
Dissimilar inclusions:
• The somewhat poorly drained Wilcox soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
• Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Figure 11.—A baseball field in an area of Stough fine sandy loam, 0 to 2 percent slopes.

- Restricting use during wet periods reduces surface compaction.
- Planting forage plants that are tolerant of wet conditions increases the survival rate.

Woodland

Suitability: Well suited
Major concerns: Plant competition, wetness
Management measures:
- Proper site preparation helps to control the growth of undesirable plants.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by wetness.

Dwellings

Suitability: Poorly suited
Major concern: Wetness
Management measures:
- Special designs and careful construction help to overcome the problems associated with wetness.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Wetness, moderately slow permeability
Management measures:
- Enlarging the size of the filter field helps to overcome the slow permeability.
- A better suited site can be selected.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 9W

SuE3—Sumter-Demopolis complex, 5 to 17 percent slopes, severely eroded

Setting

Landform: Uplands
Landform position: Side slopes
Slope range: 5 to 17 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 150 acres
Major land use: Pasture

Composition

Sumter and similar soils: 58 percent
Demopolis and similar soils: 27 percent
Included soils: 15 percent

Soil Properties and Qualities

Sumter

Drainage class: Well drained
Permeability: Slow
Parent material: Marly clay and chalk
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if tilled when too wet.
Shrink-swell potential: High

Demopolis

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Chalk
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if tilled when too wet.
Shrink-swell potential: Moderate

Typical Profile

Sumter

Surface layer:
0 to 4 inches—mottled dark grayish brown and yellowish brown silty clay loam

Subsoil:
4 to 21 inches—mottled yellowish brown and pale brown silty clay loam

Underlying material:
21 to 40 inches—firm chalk

Demopolis

Surface layer:
0 to 6 inches—dark grayish brown silty clay loam

Underlying material:
6 to 14 inches—pale brown extremely channery silty clay loam
14 to 40 inches—firm chalk

Inclusions

Similar inclusions:
- The well drained Binnsville soils in similar landscape positions

Dissimilar inclusions:
- The very deep Kipling soils in similar positions on uplands
- The very deep Okolona soils in higher areas on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Erosion, slope
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Moderately suited
Major concerns: Plant competition, erosion, seedling mortality
Management measures:
- Proper site preparation increases the seedling survival rate and reduces competition from unwanted plants.
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Unsuited
Major concerns: Slope, shrink swell potential, depth to rock
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Depth to rock, slow permeability
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: Sumter—VIIe; Demopolis—VIe
Woodland ordination symbol: Sumter—3C; Demopolis—3D

SwB2—Sweatman fine sandy loam, 2 to 5 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land uses: Pasture, row crops

Composition

Sweatman and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Moderate
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsoil:
5 to 16 inches—yellowish red silty clay
16 to 30 inches—yellowish red silty clay that has strong brown mottles
30 to 38 inches—yellowish red silty clay that has red and strong brown mottles

Underlying material:
38 to 60 inches—stratified layers of pale brown weathered shale and mottled strong brown and red sandy loam

Inclusions

Dissimilar inclusions:
- The somewhat poorly drained Wilcox soils in lower positions on uplands

Similar inclusions:
- The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Equipment limitation
Management measures:
- Using special equipment and logging during the drier seasons reduce the equipment limitation.

Dwellings

Suitability: Moderately suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the shrink-swell potential.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Moderately slow permeability
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8C

SwC2—Sweatman fine sandy loam, 5 to 8 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land uses: Pasture, row crops

Composition

Sweatman and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Moderate
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Moderate
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsoil:
5 to 16 inches—yellowish red silty clay
16 to 30 inches—yellowish red silty clay that has strong brown mottles
30 to 38 inches—yellowish red silty clay that has red and strong brown mottles

Underlying material:
38 to 60 inches—stratified layers of pale brown weathered shale and mottled strong brown and red sandy loam

Inclusions

Dissimilar inclusions:
• The somewhat poorly drained Wilcox soils in lower positions on uplands
Similar inclusions:
• The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Poorly suited
Major concern: Erosion
Management measures:
• Conservation tillage, contour farming, grassed waterways, and terraces reduce the hazard of erosion.
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Equipment limitation
Management measures:
• Using special equipment and logging during the drier seasons reduce the equipment limitation.

Dwellings

Suitability: Moderately suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the shrink-swell potential.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Moderately slow permeability
Management measures:
• An alternative site should be selected.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8C

SwD2—Sweatman fine sandy loam, 8 to 12 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land uses: Pasture, woodland

Composition

Sweatman and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsoil:
5 to 16 inches—yellowish red silty clay
16 to 30 inches—yellowish red silty clay that has strong brown mottles
30 to 38 inches—yellowish red silty clay that has red and strong brown mottles

Underlying material:
38 to 60 inches—stratified layers of pale brown weathered shale and mottled strong brown and red sandy loam

Inclusions

Dissimilar inclusions:
- The somewhat poorly drained Wilcox soils in lower positions on uplands

Similar inclusions:
- The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concern: Erosion
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concern: Equipment limitation
Management measures:
- Using special equipment and logging during the drier seasons reduce the equipment limitation.

Dwellings

Suitability: Moderately suited
Major concerns: Shrink-swell potential, slope
Management measures:
- Special designs and careful construction help to overcome the problems associated with the shrink-swell potential and the slope.

Septic tank absorption fields

Suitability: Unsuited
Major concern: Moderately slow permeability
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 8C

SwF2—Sweatman fine sandy loam, 12 to 30 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Side slopes
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 500 acres
Major land uses: Pasture, woodland

Composition

Sweatman and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

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

Subsoil:
5 to 16 inches—yellowish red silty clay
16 to 30 inches—yellowish red silty clay that has strong brown mottles
30 to 38 inches—yellowish red silty clay that has red and strong brown mottles

Underlying material:
38 to 60 inches—stratified layers of pale brown weathered shale and mottled strong brown and red sandy loam

Inclusions

Dissimilar inclusions:
- The somewhat poorly drained Wilcox soils in lower positions on uplands

Similar inclusions:
- The well drained Smithdale soils in similar positions on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Slope, erosion
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.

Woodland

Suitability: Well suited
Major concerns: Equipment limitation, erosion hazard
Management measures:
- Using special equipment and logging during the drier seasons reduce the equipment limitation.
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Unsuited
Major concern: Slope
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Moderately slow permeability, slope
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: VIIe
Woodland ordination symbol: 8C

SX—Sweatman-Smithdale association, 5 to 12 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops and side slopes
Slope range: 5 to 12 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 150 to 400 acres
Major land use: Woodland

Composition

Sweatman and similar soils: 61 percent
Smithdale and similar soils: 20 percent
Included soils: 19 percent

Soil Properties and Qualities

Sweatman

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Smithdale

Drainage class: Well drained
Permeability: Moderate
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface is friable and is easily tilled throughout a wide range of moisture content.

Shrink-swell potential: Low

Typical Profile

Sweatman

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

Subsoil:
6 to 16 inches—yellowish red silty clay
16 to 26 inches—yellowish red silty clay that has red mottles

Underlying material:
26 to 35 inches—stratified layers of grayish brown and red weathered shale and pale brown fine sandy loam
35 to 60 inches—stratified layers of light brownish gray weathered shale that have red mottles and yellowish brown fine sandy loam

Smithdale

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

Subsoil:
8 to 38 inches—yellowish red clay loam
38 to 48 inches—yellowish red sandy clay loam
48 to 60 inches—red sandy loam

Inclusions

Dissimilar inclusions:
- The well drained Jena soils on narrow flood plains
- The somewhat poorly drained Mantachie soils on narrow flood plains

Similar inclusions:
- The moderately well drained Savannah soils in higher positions on ridgetops
- The well drained Ruston soils in higher positions on uplands
- Areas of soils that have slopes of less than 5 percent

Use and Management

Cropland

Suitability: Moderately suited in areas that have slopes of less than 8 percent, poorly suited in areas that have slopes of 8 percent or more
Major concerns: Slope, erosion
Management measures:
- Management practices, such as conservation tillage, terraces, grassed waterways, crop residue management, contour farming, contour stripcropping, and a crop rotation system that includes grasses and legumes, reduce the runoff rate and help to control erosion.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concern: Equipment limitation
Management measures:
- Using special equipment and logging during the drier seasons reduce the equipment limitation.

Dwellings

Suitability: Moderately suited
Major concerns: Slope, shrink-swell potential in areas of Sweatman soils
Management measures:
- Special designs and careful construction help to overcome the problems associated with slope and the shrink-swell potential.

Septic tank absorption fields

Suitability: Smithdale—moderately suited; Sweatman—unsuited
Major concerns: Slope in areas of Smithdale soils; slope, moderately slow permeability in areas of Sweatman soils
Management measures:
- Installing tile lines on the contour helps to overcome the problems associated with slope.

Interpretive Groups

Land capability classification: Sweatman—VIe; Smithdale—IVe
Woodland ordination symbol: Sweatman—8C; Smithdale—8A

SY—Sweatman-Smithdale association, 12 to 35 percent slopes

Setting

Landform: Uplands
Landform position: Side slopes
Slope range: 12 to 35 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 200 to 700 acres
Major land use: Woodland (fig. 12)

Composition

Sweatman and similar soils: 46 percent
Smithdale and similar soils: 40 percent

Figure 12.—Forest land in an area of Sweatman-Smithdale association, 12 to 35 percent slopes.

Included soils: 14 percent

Soil Properties and Qualities

Sweatman

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Smithdale

Drainage class: Well drained
Permeability: Moderate
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: Moderate
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Low

Typical Profile

Sweatman

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

Subsoil:
4 to 20 inches—yellowish red silty clay
20 to 38 inches—yellowish red silty clay that has red mottles

Underlying material:
38 to 60 inches—stratified layers of grayish brown and red weathered shale and strong brown fine sandy loam

Smithdale

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

Subsoil:
6 to 20 inches—red sandy clay loam

20 to 36 inches—yellowish red sandy clay loam
36 to 60 inches—yellowish red sandy loam

Inclusions

Dissimilar inclusions:
- The well drained Jena soils on narrow flood plains
- The somewhat poorly drained Mantachie soils on narrow flood plains
- The moderately well drained Ora soils on ridgetops on uplands

Similar inclusions:
- The well drained Ruston soils in higher positions on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concerns: Slope, erosion
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Moderately suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the soil and pasture in good condition.

Woodland

Suitability: Well suited
Major concerns: Equipment limitation, erosion hazard
Management measures:
- Using special equipment and logging during the drier seasons reduce the equipment limitation.
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Unsuited
Major concerns: Slope in areas of Smithdale soils; moderate shrink-swell potential and slope in areas of Sweatman soils
Management measures:
- An alternative site should be selected.

Septic tank absorption fields

Suitability: Unsuited
Major concerns: Slope in areas of Smithdale soils; slope and moderately slow permeability in areas of Sweatman soils
Management measures:
- An alternative site should be selected.

Interpretive Groups

Land capability classification: Sweatman—VIIe; Smithdale—VIIe
Woodland ordination symbol: Sweatman—8C; Smithdale—8R

WcA—Wilcox silty clay loam, 1 to 2 percent slopes

Setting

Landform: Uplands
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land uses: Row crops, pasture

Composition

Wilcox and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish gray clay
42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Inclusions

Dissimilar inclusions:
- The well drained Sweatman soils on uplands

Similar inclusions:
- The poorly drained Mayhew soils in lower positions on uplands
- The somewhat poorly drained Stough soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, seedling mortality, equipment limitation
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.
- A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 8C

WcB—Wilcox silty clay loam, 2 to 5 percent slopes

Setting

Landform: Uplands
Landform position: Ridgetops
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Wilcox and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Medium
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish clay
42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Inclusions

Dissimilar inclusions:
- The well drained Sweatman soils on uplands

Similar inclusions:
- The poorly drained Mayhew soils in lower positions on uplands
- The somewhat poorly drained Stough soils in similar positions on uplands

Use and Management

Cropland

Suitability: Well suited
Major concern: Erosion
Management measures:
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
- Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, equipment limitation, seedling mortality
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.
- A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8C

WcC2—Wilcox silty clay loam, 5 to 8 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Hillsides
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland (fig. 13)

Composition

Wilcox and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Medium
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Moderate
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish gray clay

Figure 13.—A young pine plantation in an area of Wilcox silty clay loam, 5 to 8 percent slopes, eroded. The understory vegetation is dense.

42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Inclusions

Dissimilar inclusions:
- The well drained Sweatman soils on uplands

Similar inclusions:
- The poorly drained Mayhew soils in lower positions on uplands
- The somewhat poorly drained Stough soils in similar positions on uplands

Use and Management

Cropland

Suitability: Moderately suited

Major concern: Erosion
Management measures:
• Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
• Conservation tillage, terraces, grassed waterways, and a cropping system that includes grasses and legumes decrease the runoff rate and help to control erosion.
• Returning crop residue to the soil and growing cover crops reduce the hazard of erosion and improve tilth.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
• Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, equipment limitation, seedling mortality
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.
• A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8C

WcE2—Wilcox silty clay loam, 8 to 17 percent slopes, eroded

Setting

Landform: Uplands
Landform position: Hillsides
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Wilcox and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish gray clay
42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Inclusions

Dissimilar inclusions:
• The well drained Sweatman soils on uplands
Similar inclusions:
• The poorly drained Mayhew soils in lower positions on uplands

Use and Management

Cropland

Suitability: Unsuited
Major concern: Erosion
Management measures:
• An alternative site should be selected.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
• Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
• Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, erosion, equipment limitation, seedling mortality
Management measures:
• Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
• Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.
• Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
• Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.
• A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
• An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: VIIe
Woodland ordination symbol: 8C

WO—Wilcox silty clay loam, 1 to 3 percent slopes

Setting

Landform: Uplands
Landform position: Broad flats
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 10 to 100 acres
Major land use: Woodland

Composition

Wilcox and similar soils: 85 percent
Included soils: 15 percent

Soil Properties and Qualities

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Slow to medium
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Slight
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Typical Profile

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish gray clay
42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Inclusions

Dissimilar inclusions:
• The well drained Sweatman soils on uplands

Similar inclusions:
- The somewhat poorly drained Stough soils in similar positions on uplands
- Areas of soils that have slopes of more than 3 percent

Use and Management

Cropland

Suitability: Well suited
Major concern: Wetness
Management measures:
- Conservation tillage and crop residue management improve tilth and reduce crusting and packing after heavy rainfalls.
- Proper row arrangement and surface field ditches help to remove excess surface water.

Pasture and hay

Suitability: Well suited
Major concern: Wetness
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, equipment limitation, seedling mortality
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.

Dwellings

Suitability: Poorly suited
Major concern: Shrink-swell potential
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential.
- A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 8C

WS—Wilcox-Sweatman association, 8 to 17 percent slopes

Setting

Landform: Uplands
Landform position: Hillsides
Slope range: 8 to 17 percent
Flooding: None
Ponding: None
Shape of areas: Irregular
Size of areas: 160 to 1,000 acres
Major land use: Woodland

Composition

Wilcox and similar soils: 50 percent
Sweatman and similar soils: 37 percent
Included soils: 13 percent

Soil Properties and Qualities

Wilcox

Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Clayey shale
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Within a depth of 1.5 to 3.0 feet from January through April
Erosion hazard: Severe
Tilth: The surface layer is sticky when wet and hard when dry, and it becomes cloddy if farmed when too wet.
Shrink-swell potential: High

Sweatman

Drainage class: Well drained
Permeability: Moderately slow
Parent material: Marine sediments
Runoff: Rapid
Available water capacity: High
Seasonal high water table: Below a depth of 5.0 feet
Erosion hazard: Severe
Tilth: The surface layer is friable and is easily tilled throughout a wide range of moisture content.
Shrink-swell potential: Moderate

Typical Profile

Wilcox

Surface layer:
0 to 4 inches—dark brown silty clay loam

Subsoil:
4 to 8 inches—dark brown silty clay that has gray mottles
8 to 12 inches—mottled dark brown, grayish brown, gray, and red silty clay
12 to 35 inches—mottled yellowish red, red, gray, and grayish brown silty clay
35 to 42 inches—mottled yellowish red, red, and light brownish gray clay
42 to 55 inches—mottled grayish brown, light brownish gray, and light olive brown clay

Underlying material:
55 to 70 inches—grayish brown and light olive brown soft shale

Sweatman

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

Subsoil:
6 to 26 inches—yellowish red silty clay that has red mottles

Underlying material:
26 to 54 inches—stratified shale and fine sandy loam mottled in shades of brown, yellow, red, and gray

Inclusions

Similar inclusions:
- The somewhat poorly drained Urbo soils on uplands

Dissimilar inclusions:
- The well drained Jena soils on flood plains
- The somewhat poorly drained Mantachie soils on flood plains

Use and Management

Cropland

Suitability: Unsuited
Major concern: Erosion
Management measures:
- An alternative site should be selected.

Pasture and hay

Suitability: Well suited
Major concern: Erosion
Management measures:
- Proper stocking, controlled grazing, and weed and brush control help to keep the pasture and soil in good condition.
- Restricting use during wet periods reduces surface compaction.

Woodland

Suitability: Well suited
Major concerns: Plant competition, erosion, equipment limitation, seedling mortality
Management measures:
- Proper site preparation helps to control the growth of undesirable plants and reduces the seedling mortality rate.
- Using special equipment and logging during the drier seasons help to overcome the problems caused by the equipment limitation.
- Locating logging roads on the contour reduces the hazard of erosion.

Dwellings

Suitability: Poorly suited
Major concerns: Shrink-swell potential, slope
Management measures:
- Special designs and careful construction help to overcome the problems associated with the high shrink-swell potential and the slope.
- A better suited site can be selected.

Septic tank absorption fields

Suitability: Poorly suited
Major concerns: Slow permeability, wetness
Management measures:
- An alternative method of sewage disposal should be used to dispose of waste properly, or a more suitable site should be selected.

Interpretive Groups

Land capability classification: Wilcox—VIIe; Sweatman—VIe
Woodland ordination symbol: Wilcox—8C; Sweatman—8C

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. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. The moisture supply must be adequate, and the growing season must be sufficiently long. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources. Farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, or woodland or for other purposes. They are used for food or fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures. Public land is land not available for farming in National forests, National parks, military reservations, and State parks.

Prime farmland soils usually receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The acidity or alkalinity level of the soils is acceptable. The soils have few or no rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are frequently flooded during the growing season.

The map units that are considered prime farmland in Kemper County are listed in table 5. The location of each map unit is shown on the detailed soil maps at the back of this publication. The extent of each unit is given in table 4. The soil qualities that affect use and management are described in the section "Detailed Soil Map Units." This list does not constitute a recommendation for a particular land use.

Some soils that have a high water table and all soils that are frequently flooded during the growing season qualify as prime farmland only in areas where these limitations have been overcome by drainage measures or flood control. If applicable, the need for these measures is indicated in parentheses after the map unit name in the table. Onsite evaluation is necessary to determine if the limitations have been overcome by corrective measures.

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 for 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 woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for 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 that is in harmony with nature.

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.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils, including some not commonly grown in the survey area, are identified; the system of land capability classification used by the Natural Resources Conservation Service is explained; and the estimated yields of the main crops and hay and pasture plants are listed for each soil.

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

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors.

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

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

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

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

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

information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for use as cropland. 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 woodland, or for engineering purposes.

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

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

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

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

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

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

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

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

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

There are no subclasses in class I because the soils of this class have few limitations. The soils in class V are subject to little or no erosion, but they have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation. Class V contains only the subclasses indicated by *w, s,* or *c*.

Woodland Management and Productivity

William A. Hannaford, forester, Natural Resources Conservation Service, helped prepare this section.

An area of about 361,300 acres, or about 73 percent, of the 490,600 total acres in Kemper County is classified as commercial forest *(18, 21, 23)*. Commercial forest land is defined as forest that is producing or is capable of producing crops of industrial wood and that has not been withdrawn from timber use *(22, 20)*. The commercial forest has various types of owners. A total of 5,600 acres is owned by miscellaneous federal agencies; 116,700 acres is owned by forest industry; and 239,000 acres is owned by individuals and farmers *(18, 21, 23)*.

The commercial forest may be subdivided into forest cover types that require various management and treatment practices. Forest cover types are based on species composition, site quality, or age *(22)*. In this survey, forest types are stands of trees that are composed of the same species and grow under the same ecological and biological conditions. The forest types are named for the tree species which predominate or that are present in the largest abundance and with the highest frequency.

On this basis, the largest group is the natural loblolly-shortleaf pine forest cover type, which makes up approximately 28 percent of the total land area, or about 100,000 acres. Planted loblolly-shortleaf pine makes up about 23 percent of the total area, or about 83,400 acres; oak-pine, about 23 percent (or about 83,400 acres); oak-gum-cypress, about 15 percent (or 55,600 acres); and oak-hickory, about 11 percent (or 38,900 acres) *(22)*.

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 decreasing soil productivity and water quality. Careless application of these practices can cause erosion, deplete nutrients, and compact the soil. Site-specific forest management practices that account for topography, the hazard of erosion, the time of year, and natural site fertility help to prevent damage to soil and water resources *(17)*.

A suitable secondary use for most of the woodland is grazing. The grasses, legumes, forbs, and many of the woody plants in the understory of the pine woodland stands can be utilized for forage. Stocking the proper number of grazing animals for the amount of forage

produced prevents damage to desirable tree species. Additional information about the production of forage in woodland is in the section "Woodland Understory Vegetation."

The first tree listed for each soil under the column "common trees" is the indicator species for the soil. An indicator species is a tree that is common in the area and that is generally the most productive on a given soil.

Table 7 lists the *ordination symbol* for each soil. The first part of the ordination symbol, a number, indicates the potential productivity of a soil for the indicator species in cubic meters per hectare per year. The larger the number, the greater the potential productivity. Potential productivity is based on the site index and the point where mean annual increment is the greatest.

The second part of the ordination symbol, a letter, indicates the major kind of soil limitation for use and management. The letter "R" indicates a soil that has a significant limitation because of steepness of slope. The letter "W" indicates a soil in which excessive water, either seasonal or year-round, causes a significant limitation. The letter "C" indicates a soil that has a limitation because of the amount of clay in the upper part of the soil. The letter "S" indicates a dry, sandy soil. The letter "A" indicates a soil that has no significant restrictions or limitations for forest use and management. If a soil has more than one limitation, the priority is as follows: R, W, C, and S.

Ratings of the *erosion hazard* indicate the probability that damage may occur if site preparation activities or harvesting operations expose the soil. The risk is *slight* if no particular preventive measures are needed under ordinary conditions; *moderate* if erosion-control measures are needed for particular silvicultural activities; and *severe* if special precautions are needed to control erosion for most silvicultural activities. Ratings of moderate or severe indicate the need for construction of higher standard roads, additional maintenance of roads, additional care in planning of harvesting and reforestation operations, or use of specialized equipment.

Ratings of *equipment limitation* indicate limits on the use of forest management equipment, year-round or seasonal, because of such soil characteristics as slope, wetness, or susceptibility of the surface layer to compaction. As slope gradient and length increase, it becomes more difficult to use wheeled equipment. On the steeper slopes, tracked equipment must be used. On the steepest slopes, even tracked equipment cannot operate; more sophisticated systems are needed. The rating is *slight* if equipment use is restricted by soil wetness for less than 2 months and if special equipment is not needed. The rating is *moderate* if slopes are steep enough that wheeled equipment cannot be operated safely across the slope, if soil wetness restricts equipment use for 2 to 6 months per year, or if special equipment is needed to avoid or reduce soil compaction. The rating is *severe* if slopes are steep enough that tracked equipment cannot be operated safely across the slope, if soil wetness restricts equipment use for more than 6 months per year, or if special equipment is needed to avoid or reduce soil compaction. Ratings of moderate or severe indicate a need to choose the most suitable equipment and to carefully plan the timing of harvesting and other management operations.

Ratings of *seedling mortality* refer to the probability of the death of naturally occurring or properly planted seedlings of good stock in periods of normal rainfall, as influenced by kinds of soil or topographic features. Seedling mortality is caused primarily by too much water or too little water. The factors used in rating a soil for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the periods when the water table is high, and rooting depth. The mortality rate generally is highest on soils that have a sandy or clayey surface layer. The risk is *slight* if, after site preparation, expected mortality is less than 25 percent; *moderate* if expected mortality is between 25 and 50 percent; and *severe* if expected mortality exceeds 50 percent. Ratings of moderate or severe indicate that it may be necessary to use containerized or larger than usual planting stock or to make special site preparations, such bedding, furrowing, installing a surface drainage system, and providing artificial shade for seedlings. Reinforcement planting is often needed if the risk is moderate or severe.

Ratings of *plant competition* indicate the likelihood of the growth or invasion of undesirable plants. Plant competition is more severe on the more productive soils, on poorly drained soils, and on soils having a restricted root zone that holds moisture. The risk is *slight* if competition from undesirable plants hinders adequate natural or artificial reforestation but does not necessitate intensive site preparation and maintenance. The risk is *moderate* if competition from undesirable plants hinders natural or artificial reforestation to the extent that intensive site preparation and maintenance are needed. The risk is *severe* if competition from undesirable plants prevents adequate natural or artificial reforestation unless the site is intensively prepared and maintained. A moderate or severe rating indicates the need for site preparation to ensure the development of an adequately stocked stand. Managers must plan site preparation measures to ensure reforestation without delays.

The potential productivity of *common trees* on a soil is expressed as *site index*. Common trees are listed in the

order of their observed general occurrence. Generally, only two or three tree species dominate.

The site index is determined by taking height measurements and determining the age of selected trees within stands of a given species. This index is the average height, in feet, that the trees attain in a specified number of years. This index applies to fully stocked, even-aged, unmanaged stands *(3, 6, 7, 8, 9, 10, 14)*.

The *productivity class* is the expected volume produced by the most important trees, expressed in cubic meters per hectare per year. Cubic meters per hectare can be converted to cubic feet per acre by multiplying by 14.3. It can be converted to board feet by multiplying by a factor of about 71. For example, a productivity class of 8 means the soil can be expected to produce 114 cubic feet per acre per year at the point where mean annual increment culminates, or about 568 board feet per acre per year.

Trees to plant are those that are used for reforestation or, under suitable conditions, natural regeneration. They are suited to the soils and can produce a commercial wood crop. The desired product, topographic position (such as a low, wet area), and personal preference are three factors among many that can influence the choice of trees for use in reforestation.

Woodland Understory Vegetation

Understory vegetation consists of grasses, forbs, shrubs, and other plants. If well managed, some woodland can produce enough understory vegetation to support grazing of livestock or wildlife, or both, without damage to the trees.

The quantity and quality of understory vegetation vary with the kind of soil, the age and kind of trees in the canopy, the density of the canopy, and the depth and condition of the litter. The density of the canopy determines the amount of light that understory plants receive.

Table 8 shows, for each soil suitable for woodland, the potential for producing understory vegetation. The total production of understory vegetation includes the herbaceous plants and the leaves, twigs, and fruit of woody plants up to a height of 4.5 feet. It is expressed in pounds per acre of air-dry vegetation in favorable, normal, and unfavorable years. In a favorable year, soil moisture is above average during the optimum part of the growing season; in a normal year, soil moisture is average; and in an unfavorable year, it is below average.

The table also lists the common names of the characteristic vegetation on each soil and the *composition*, by percentage of air-dry weight, of each kind of plant. The table shows the kind and percentage of understory plants expected under a canopy density that is most nearly typical of woodland in which the production of wood crops is highest.

Recreation

In table 9, the soils of the survey area are rated according to the limitations that affect their suitability for recreation. The ratings 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 are also important. Soils 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.

In the table, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or a combination of these measures.

The information in the table can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 12 and interpretations for dwellings without basements and for local roads and streets in table 11.

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 best soils have gentle slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes, stones, or

boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock or a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

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

In table 10, the soils in Kemper County are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

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

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

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

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

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

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

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

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are strawberry bush, American beautyberry, and oakleaf hydrangea.

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

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

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

Habitat for openland wildlife consists of cropland, pasture, idle fields, 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, mourning dove, meadowlark, field sparrow, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and whitetailed 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, raccoon, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to rural and 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 estimated data and test data in the "Soil Properties" section.

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 within a depth of 5 or 6 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 grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, 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

Table 11 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties

or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock or a very firm, dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture, permeability, and depth to the water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, and shrinking and swelling can cause the movement of footings. Depth to a high water table, depth to bedrock, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

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 stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock, depth to a high water table, flooding, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, depth to a high water table, depth to bedrock, and the available water capacity in the upper 40 inches affect plant growth. Flooding, wetness, slope, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 12 shows the degree and the kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

The table also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and that good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

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 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, depth to a high water table, depth to bedrock, and flooding affect absorption of the effluent. Bedrock interferes with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while anaerobic and aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold

the sewage at a minimum depth of 8 feet for anaerobic treatment or within a depth of 2 to 5 feet for aerobic treatment. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

The table gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, depth to a high water table, depth to bedrock, flooding, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope and bedrock can cause construction problems.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the 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.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in the table are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock, depth to a water table, slope, and flooding affect both types of landfill. Texture and soil reaction affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

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.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to soil blowing.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 13 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

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 soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by a high 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 engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, a low shrink-swell potential, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential and slopes of 15 to 25 percent. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, or slopes of more than 25 percent. They are wet and have a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

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 the table, only the probability 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 engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick. All other soils are rated as an improbable source.

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.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by gravel, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, and bedrock.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They have little or no gravel and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel, have slopes of more than 15 percent, or have a seasonal high water table at or near the surface.

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 releases a variety of plant nutrients as it decomposes.

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

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

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to 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. 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 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 gravel. 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 and the permeability of the aquifer. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock or to

other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; and susceptibility to flooding. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage may be adversely affected by extreme acidity. Availability of drainage outlets is not considered in the ratings.

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

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

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

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-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 shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 15 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading "Soil Series and Their Morphology."

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 as much as 15 percent, 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 *(2)* and the system adopted by the American Association of State Highway and Transportation Officials *(1)*.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-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. Soils exhibiting engineering properties of two groups can have a dual classification, for example, SP-SM.

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 grain-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. No areas of highly organic soils are recognized in Kemper County.

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 grain-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 omitted in the table.

Physical and Chemical Properties

Table 16 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence the 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-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major 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. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of movement of water through the soil 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 in each major soil layer is stated in inches of water per inch of soil. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. 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.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major 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.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, more than 9 percent, is sometimes used.

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. Losses are expressed in tons per acre per year. These estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by water that can occur over a sustained period without affecting crop productivity. The rate is expressed in tons per acre per year.

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

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

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

Hydrologic soil groups are used to estimate runoff from precipitation. Soils are assigned to one of four groups. They are grouped according to the infiltration of water when the soils 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 very 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 to very 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 permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to two hydrologic groups in table 17, the first letter is for drained areas and the second is for undrained areas.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflowing streams, by runoff from adjacent slopes, or by inflow from high tides. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in swamps and marshes or in a closed depression is considered ponding.

The table gives the frequency and duration of flooding and the time of year when flooding is most likely.

Frequency, duration, and probable dates of occurrence are estimated. Frequency generally is expressed as *none, rare, occasional,* or *frequent. None* means that flooding is not probable. *Rare* means that flooding is unlikely but possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year). *Occasional* means that flooding occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year). *Frequent* means that flooding occurs often under normal weather conditions (the chance of flooding is more than a 50 percent in any year). Duration is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 days to 1 month), and *very long* (more than 1 month). The time of year that floods are most likely to occur is expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding 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 is 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.

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The estimates are based mainly on the evidence of a saturated zone, namely grayish colors or mottles in the soil. Indicated in the table are the depth to the seasonal high water table; the kind of water table, that is, *perched* or *apparent*; and the months of the year that the water table commonly is highest. A water table that is seasonally high for less than 1 month is not indicated in the table.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. "More than 6.0" indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is specified as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Risk of corrosion pertains to potential soil-induced

electrochemical or chemical action that dissolves 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 in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel 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 is also expressed as *low, moderate*, or *high*. It is based on soil texture, acidity, and the amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(19)*. 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 on laboratory measurements. Table 18 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven 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; 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 *udults*, 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 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 known kind of soil. 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, mineral content, temperature regime, depth of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, siliceous, thermic Typic Hapludults.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. There can be some variation in the texture of the surface layer or of the substratum within a series. The Smithdale series is an example of fine-loamy, siliceous, thermic Typic Hapludults in Kemper County.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each series. The soil is compared with similar soils and with nearby soils of other 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" *(24)*. Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" *(19)*. Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units of each soil series are described in the section "Detailed Soil Map Units."

Arkabutla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Ridges
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Rosebloom

- Rosebloom soils are poorly drained. They are in lower positions and in depressions on flood plains.

Taxonomic class: Fine-silty, mixed, acid, thermic Aeric Fluvaquents

Typical Pedon

Typical pedon of Arkabutla silt loam, in an area of Rosebloom-Arkabutla association, frequently flooded; in the Bogue Chitto Swamp woods, about 4 miles southwest of the Lynville community, about 1.5 miles east on a gravel road from the Neshoba County line, about 300 feet north of a gravel road; NE¼NE¼ sec. 5, T. 11 N., R. 14 E.

A—0 to 5 inches; dark brown (10YR 4/3) silt loam; weak fine granular structure; friable; many fine and medium roots; common fine faint light brownish gray (10YR 6/2) iron depletions; strongly acid; abrupt smooth boundary.

Bw—5 to 17 inches; 50 percent yellowish brown (10YR 5/8) and 50 percent light brownish gray (10YR 6/2) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; yellowish brown masses of iron accumulation; light brownish gray iron depletions; very strongly acid; clear smooth boundary.

Bg1—17 to 28 inches; light brownish gray (10YR 6/2) silty clay loam; weak and moderate medium subangular blocky structure; friable; few fine and medium roots; few fine manganese concretions; many fine prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; clear smooth boundary.

Bg2—28 to 60 inches; gray (10YR 5/1) silty clay loam; moderate medium subangular blocky structure; firm; few medium manganese concretions; many fine prominent yellowish brown (10YR 5/8) 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, except for the surface layer in areas that have been limed

Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 5 inches

Content of clay within the control section: 20 to 35 percent

A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or silty clay loam

Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 8
Texture—silt loam, loam, or silty clay loam

Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—2 or less
Texture—silt loam, loam, or silty clay loam

Bibb Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Nearly level areas and depressions
Parent material: Stratified loamy alluvium
Slope range: 0 to 2 percent
Associated soils: Kinston, Kirkville, Mantachie, Mooreville

- Kinston soils are in similar landscape positions and are fine-loamy.
- Kirkville, Mantachie, and Mooreville soils are in slightly higher, more convex positions on flood plains. They are better drained than the Bibb soils.

Taxonomic class: Coarse-loamy, siliceous, acid, thermic Typic Fluvaquents.

Typical Pedon

Typical pedon of Bibb sandy loam, occasionally flooded, about 14 miles southwest of DeKalb on Old Jackson Road, about 1 mile northwest on a county road near the Neshoba County line, 390 feet east of the road, in a pasture; SW¼NW¼ sec. 30, T. 10 N., R. 14 E.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt smooth boundary.

Cg1—4 to 15 inches; light brownish gray (10YR 6/2) fine sandy loam; massive; friable; common fine roots; few fine brown concretions; thin strata of grayish loamy fine sand; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; clear smooth boundary.

Cg2—15 to 35 inches; light brownish gray (10YR 6/2) loam; massive; friable; common fine roots; few fine black and brown concretions; thin strata of grayish loamy fine sand; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid; clear smooth boundary.

Cg3—35 to 70 inches; light gray (10YR 6/1) loam; massive; friable; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: Equal to the total thickness of the A horizon
Reaction: Very strongly acid or strongly acid throughout the profile, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation below a depth of 4 inches
Content of clay within the control section: 2 to 18 percent

Ap horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—sandy loam

Cg horizon:
Hue—10YR
Value—4 to 7
Chroma—2 or less
Texture—fine sandy loam, sandy loam, or loam

Binnsville Series

Depth class: Shallow
Drainage class: Well drained
Permeability: Very slow
Landform: Uplands
Position on landform: Ridgetops
Parent material: Material weathered from Selma chalk
Slope range: 2 to 5 percent
Associated soils: Demopolis, Kipling, Okolona, Oktibbeha
- All of the associated soils are on uplands.
- Demopolis soils are loamy.
- Sumter soils are moderately deep.
- Kipling and Oktibbeha soils are very deep and are acid in the upper part of the solum.
- Okolona soils are very deep.

Taxonomic class: Clayey, carbonatic, thermic, shallow Typic Rendolls

Typical Pedon

Typical pedon of Binnsville silty clay loam, in an area of Binnsville-Demopolis complex, 2 to 5 percent slopes, eroded; about 1¼ miles east of Binnsville, in a pasture; SW¼NE¼ sec. 4, T. 12 N., R. 19 E.

Ap—0 to 6 inches; very dark gray (10YR 3/1) silty clay loam; moderate fine granular structure; friable; common fine roots; few fine brown and black concretions; few fine to coarse platy chalk fragments; mildly alkaline; clear wavy boundary.
A—6 to 12 inches; very dark grayish brown (10YR 3/2) silty clay loam; moderate fine granular structure; friable; few fine brown and black concretions; few fine and medium chalk fragments; slightly effervescent; moderately alkaline; clear wavy boundary.
Cr—12 to 30 inches; light gray (10YR 7/2) chalk; common fine to medium distinct yellow (2.5Y 7/6) splotches and streaks; weak thick platy rock structure; very firm (can be cut with a spade when moist); less than 20 percent soil in thin layers between some plates and in cracks in the upper 10 inches; violently effervescent; moderately alkaline.

Range in Characteristics

Depth to rock: 10 to 20 inches
Reaction: Slightly alkaline or moderately alkaline
Redoximorphic features: None

Ap horizon:
Hue—10YR or 2.5Y
Value—3
Chroma—1 or 2
Texture—silty clay loam or silty clay

Cr horizon:
Hue—10YR, 2.5Y, or 5Y
Value—6 to 8
Chroma—1 to 3
Structure—massive or platy rock structure

Catalpa Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Landform: Flood plains
Position on landform: Flats and depressions
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Leeper
- Leeper soils are at slightly lower elevations on the flood plain. They are calcareous and have a lighter colored and thinner A horizon than the Catalpa soils. Leeper soils also have iron depletions below a depth of 10 inches because of wetness.

Taxonomic class: Fine, montmorillonitic, thermic Fluvaquentic Hapludolls

Typical Pedon

Typical pedon of Catalpa silty clay loam, occasionally flooded, about 2.5 miles south of the county line, 1.25 miles east of Highway 45, in a hay field; NE¼SW¼ sec. 17, T. 12 N., R. 18 E.

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silty clay loam; moderate fine granular structure; firm; many fine roots; few fine brown and black concretions; few wormcasts; few fine faint dark grayish brown

(10YR 4/2) iron depletions; mildly alkaline; clear smooth boundary.

A—7 to 22 inches; very dark gray (10YR 3/1) clay; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; few fine lime concretions; some worm and root holes filled with material from the Ap horizon; shiny pressure faces on peds; mildly alkaline; gradual smooth boundary.

Bw1—22 to 35 inches; dark grayish brown (10YR 4/2) clay; weak coarse prismatic structure parting to moderate medium and coarse subangular and angular blocky; firm; few fine roots; few fine lime concretions and shells; shiny pressure faces on peds; few to common fine faint dark gray (10YR 4/1) iron depletions; slightly effervescent; mildly alkaline; gradual wavy boundary.

Bw2—35 to 48 inches; dark grayish brown (10YR 4/2) clay; weak coarse prismatic structure parting to moderate fine and medium subangular and angular blocky; firm; few stress surfaces on some peds; few fine roots; common fine lime concretions; few to common shells; shiny pressure faces on peds; many fine and medium prominent yellowish brown (10YR 5/6) and olive brown (2.5Y 4/4) masses of iron accumulation; slightly effervescent; mildly alkaline; gradual wavy boundary.

BC—48 to 64 inches; 60 percent gray (10YR 5/1) and 40 percent yellowish brown (10YR 5/8) clay; massive; firm; few slickensides; few fine roots; common fine and medium lime concretions; few shells; gray iron depletions; yellowish brown iron accumulations; mildly alkaline.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Slightly acid to moderately alkaline
Redoximorphic features: Iron depletions and masses of iron accumulation below a depth of 22 inches
Content of clay within the control section: 35 to 50 percent

A horizon:
Hue—10YR or 2.5Y
Value—2 or 3
Chroma—1 to 3
Texture—silty clay loam

B horizon:
Hue—10YR
Value—4
Chroma—2
Texture—clay

BC horizon:
Hue—10YR
Value—5 or 6
Chroma—1 to 8
Texture—clay

Daleville Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Landform: Terraces
Position on landform: Flats and depressions
Parent material: Loamy Coastal Plain sediments
Slope range: 0 to 2 percent
Associated soils: Jena, Kinston, Mantachie, Quitman

- The well drained Jena soils are on flood plains.
- Kinston soils, which are on flood plains, do not have an argillic horizon.
- The somewhat poorly drained Mantachie soils, on flood plains, are browner in the upper part of the B horizon than the Daleville soils. They do not have an argillic horizon.
- Quitman soils are in higher, more convex positions on uplands and stream terraces. They are browner in the upper part of the Bt horizon and are better drained than the Daleville soils.

Taxonomic class: Fine-loamy, siliceous, thermic Typic Paleaquults

Typical Pedon

Typical pedon of Daleville sandy loam, in an area of Daleville-Jena association, frequently flooded; about 4 miles northeast of DeKalb on Mississippi Highway 16, 3 miles southeast on Townsend Road, about 0.7 mile south on a paved road, 200 feet south along the paved road from the southern end of Sucarnoochee Creek Bridge, about 180 feet west, in a wooded area; SW¼NW¼ sec. 3, T. 27 N., R. 17 E.

A—0 to 4 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; many fine and medium roots; many medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; many medium faint light brownish gray (10YR 6/2) iron depletions; strongly acid; clear smooth boundary.

Eg—4 to 9 inches; grayish brown (10YR 5/2) sandy loam; weak fine granular structure; friable; many fine and medium roots; many fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg1—9 to 18 inches; grayish brown (10YR 5/2) sandy clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; few faint clay films on faces of

peds; common medium distinct yellowish brown (10YR 5/6 and 5/4) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btg2—18 to 30 inches; light brownish gray (10YR 6/2) sandy clay loam; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; common distinct clay films on faces of peds; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg3—30 to 52 inches; light brownish gray (10YR 6/2) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common distinct clay films on faces of peds; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg4—52 to 70 inches; grayish brown (10YR 5/2) sandy clay loam; weak medium subangular blocky structure; firm; few faint clay films on faces of peds; many coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 60 to more than 80 inches
Reaction: Very strongly acid or strongly acid, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation throughout the profile
Content of clay within the control section: 20 to 35 percent

A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 or 2
Texture—sandy loam

E horizon:
Hue—10YR
Value—5 to 7
Chroma—1 or 2
Texture—sandy loam or loam

Btg horizon:
Hue—10YR
Value—4 to 7
Chroma—1 or 2
Texture—loam, sandy clay loam, or clay loam

Demopolis Series

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately slow
Landform: Uplands
Position on landform: Ridgetops and side slopes
Parent material: Chalk
Slope range: 2 to 17 percent
Associated soils: Binnsville, Okolona, Oktibbeha, Sumter

- All of the associated soils are on uplands.
- The well drained Binnsville and Okolona soils have darker colored A horizons and are deeper over chalk than the Demopolis soils.
- The moderately well drained Oktibbeha soils do not have a calcareous solum.
- The well drained Sumter soils have a solum that is more than 20 inches thick.

Taxonomic class: Loamy, carbonatic, thermic, shallow Typic Udorthents

Typical Pedon

Typical pedon of Demopolis silty clay loam, in an area of Binnsville-Demopolis complex, 2 to 5 percent slopes, eroded; in an area of cropland about 1 mile southeast of Binnsville, 1,000 feet east of a blacktop road, 10 feet south of a gravel road, in a field; NW¼NW¼ sec. 9, T. 21 N., R. 19 E.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silty clay loam; weak fine granular structure; friable; common fine roots; few wormcasts; common fine light gray nodules of calcium carbonate; about 5 percent, by volume, chalk channers; strongly effervescent; moderately alkaline; abrupt smooth boundary.

C—4 to 10 inches; dark grayish brown (10YR 4/2) extremely channery silty clay loam; weak fine granular structure; friable; few fine roots; about 75 percent, by volume, light gray (2.5Y 7/2) chalk channers; strongly effervescent; moderately alkaline; clear irregular boundary.

Cr—10 to 40 inches; light gray (2.5Y 7/2) chalk that has common fine to coarse yellow (2.5Y 7/6) streaks and splotches; thick platy rock structure.

Range in Characteristics

Thickness of the solum: 4 to 20 inches
Reaction: Slightly alkaline or moderately alkaline
Redoximorphic features: None
Content of clay within the control section: 20 to 35 percent

A horizon:
Hue—10YR or 2.5Y
Value—4 or 5
Chroma—2 to 4
Texture—silty clay loam

C horizon:
Hue—10YR or 2.5Y
Value—5 to 7

Chroma—1 or 2
Texture—extremely channery silty clay loam

Cr horizon:
Hue—10YR, 2.5Y, or 5Y
Value—6 to 8
Chroma—1 to 3
Structure—massive or platy rock structure

Freest Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Landform: Uplands
Position on landform: Broad flats
Parent material: Loamy and clayey sediments
Slope range: 0 to 5 percent
Associated soils: Kipling, Savannah, Sweatman

- Kipling soils, which are in similar positions on uplands, have more clay and less sand in the upper part of the Bt horizon than the Freest soils. They are somewhat poorly drained.
- Savannah soils, which are in similar positions on uplands, have a brittle and compact fragipan in the lower part of the subsoil.
- Sweatman soils, which are on ridges and hillsides on uplands, have more clay and less sand in the upper part of the Bt horizon than the Freest soils. They are well drained.

Taxonomic class: Fine-loamy, siliceous, thermic Aquic Paleudalfs

Typical Pedon

Typical pedon of Freest sandy loam, 0 to 2 percent slopes; 2.0 miles east of Scooba on Mississippi Highway 16, about 1.25 miles south on a gravel road, 0.15 mile east on a gravel road, 0.25 mile south on the dirt road, 40 feet east, in a field; SE¼NW¼ sec. 14, T. 11 N., R. 18 E.

Ap—0 to 5 inches; brown (10YR 5/3) sandy loam; weak fine granular structure; friable; common fine roots; few fine faint pale brown (10YR 6/3) masses of iron accumulation; strongly acid; abrupt smooth boundary.

E—5 to 9 inches; pale brown (10YR 6/3) sandy loam; weak medium granular and subangular blocky structure; friable; common fine roots; common fine faint light brownish gray (10YR 6/2) iron depletions and yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Bt1—9 to 23 inches; 50 percent yellowish brown (10YR 5/6) and 50 percent pale brown (10YR 6/3) loam; weak medium prismatic structure parting to moderate medium angular blocky; firm; few fine roots; few faint clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—23 to 35 inches; 70 percent yellowish brown (10YR 5/6) and 30 percent light brownish gray (10YR 6/2) clay loam; moderate medium and coarse prismatic structure parting to moderate medium angular blocky; firm; many prominent clay films on faces of peds; few fine black and brown concretions; yellowish brown masses of iron accumulation; light brownish gray iron depletions; very strongly acid; clear wavy boundary.

Bt3—35 to 45 inches; 60 percent light brownish gray (10YR 6/2), 30 percent red (2.5YR 4/8), and 10 percent yellowish brown (10YR 5/6) clay loam; moderate medium and coarse prismatic structure parting to moderate medium and coarse angular blocky; firm; common distinct clay films on faces of peds; few fine brown and black concretions; light brownish gray iron depletions; red and yellowish brown masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt4—45 to 66 inches; 60 percent light brownish gray (10YR 6/2), 20 percent yellowish brown (10YR 5/6), and 20 percent pale brown (10YR 6/3) clay loam; moderate medium and coarse prismatic structure parting to moderate medium and coarse angular blocky; firm; many prominent clay films on faces of peds; common fine black and brown concretions; light brownish gray iron depletions; yellowish brown and pale brown masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid to moderately acid, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 23 inches
Content of clay within the control section: 18 to 35 percent

A horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—sandy loam

E horizon:
Hue—10YR
Value—5
Chroma—2 or 3
Texture—sandy loam

Upper part of the Bt horizon:
Hue—10YR
Value—5 or 6

Chroma—3 to 6
Texture—loam or sandy clay loam

Lower part of the Bt horizon:
Hue—10YR
Value—6
Chroma—1 or 2
Texture—clay loam

Houlka Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Landform: Flood plains
Position on landform: Nearly level and depressional areas
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Kinston, Leeper
- The poorly drained Kinston soils are in lower positions on flood plains, do not have as much clay in the control section, and have a grayish matrix directly below the A horizon.
- The somewhat poorly drained Leeper soils are in similar positions on flood plains, have a high shrink-swell potential, and are moderately acid to moderately alkaline.

Taxonomic class: Fine, montmorillonitic, acid, thermic Aeric Epiaquerts

Typical Pedon

Typical pedon of Houlka silty clay loam, frequently flooded, about 2.5 miles east of Sucarnoochee on U.S. Highway 45, about 0.5 mile north on the logging road, 50 feet west on the logging road, 30 feet south, in a wooded area; NW¼NW¼ sec. 35, T. 11 N., R. 18 E.

A1—0 to 3 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate fine granular structure; friable; many fine and medium roots; strongly acid; clear smooth boundary.
A2—3 to 11 inches; dark brown (10YR 4/3) silty clay; moderate fine and medium subangular blocky structure; firm; many fine and medium roots; common medium faint light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear smooth boundary.
Bw—11 to 21 inches; light brownish gray (10YR 6/2) silty clay loam; moderate fine and medium subangular blocky structure; firm; common fine and medium roots; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bss1—21 to 31 inches; light brownish gray (10YR 6/2) silty clay; few fine faint strong brown stains along root channels; moderate medium and coarse angular blocky structure; firm; many striated pressure faces; many slickensides; nearly parallel faces on slickenside planes 2 to 4 inches apart; few fine and medium roots; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bss2—31 to 51 inches; light brownish gray (10YR 6/2) clay; moderate coarse angular blocky (wedge-shaped) parting to moderate medium angular and subangular blocky structure; firm; slickenside planes are 2 to 4 inches apart and have thick polished and grooved faces; slickenside ridges are 4 to 12 inches apart and 1 to 5 inches in height; few fine roots; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bss3—51 to 69 inches; grayish brown (2.5Y 5/2) clay; moderate coarse angular blocky (wedge-shaped) parting to moderate medium angular and subangular blocky structure; firm; slickenside planes are 2 to 4 inches apart and have thick polished and grooved faces; slickenside ridges are 4 to 12 inches apart and 1 to 5 inches in height; few fine roots; many medium prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bss4—69 to 81 inches; grayish brown (2.5Y 5/2) clay; moderate coarse angular blocky (wedge-shaped) parting to moderate medium angular and subangular blocky structure; firm; slickenside planes are 2 to 4 inches apart and have thick polished and grooved faces; slickenside ridges are 4 to 12 inches apart and 1 to 5 inches in height; few fine roots; common medium distinct strong brown (7.5YR 5/6) strips along roots; many medium prominent strong brown (7.5YR 5/8) 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, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation below a depth of 11 inches
Content of clay within the control section: 35 to 55 percent

Ap and A horizons:
Hue—10YR
Value—4
Chroma—2 or 3
Texture—silty clay loam or silty clay

Upper part of the B horizon:
Hue—10YR

Value—4 to 6
Chroma—2 to 4
Texture—silty clay or loam

Lower part of the B horizon:
Hue—10YR or 2.5Y
Value—4 to 7
Chroma—1 or 2
Texture—silty clay or clay

Jena Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Slightly convex, natural levees
Parent material: Loamy alluvium
Slope range: 0 to 2 percent
Associated soils: Daleville, Kinston, Kirkville, Mantachie, Mooreville
- The poorly drained Daleville soils are in flats and depressions on terraces.
- Kinston soils are in lower positions on flood plains and are poorly drained.
- Mantachie soils are in lower positions on flood plains and are somewhat poorly drained.
- Kirkville and Mooreville soils are in slightly lower positions on flood plains, are moderately well drained, and have a fine-loamy control section.

Taxonomic class: Coarse-loamy, siliceous, thermic Fluventic Dystrochrepts

Typical Pedon

Typical profile of Jena fine sandy loam, occasionally flooded, about 5 miles north of DeKalb on Highway 39, about 1.5 miles north on a county road, 75 feet west of the road, in a pasture; NW¼NE¼ sec. 33, T. 12 N., R 16 E.

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; yellowish brown (7.5YR 5/4) fine sandy loam; weak fine and medium subangular blocky structure; friable; few fine roots; very strongly acid; clear wavy boundary.
Bw2—12 to 25 inches; brown (7.5YR 5/4) fine sandy loam; weak fine and medium subangular blocky structure; friable; few fine roots; very strongly acid; clear smooth boundary.
Bw3—25 to 39 inches; yellowish brown (10YR 5/6) fine sandy loam; weak fine and 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.
C1—39 to 55 inches; yellowish brown (10YR 5/6) loamy fine sand; structureless, single grained; loose; common medium pockets of uncoated sand grains; very strongly acid; gradual wavy boundary.
C2—55 to 65 inches; yellowish brown (10YR 5/6) loamy fine sand; structureless, single grained; loose; common medium pockets of uncoated sand grains; common medium distinct dark yellowish brown (10YR 4/4) and pale brown (10YR 6/3) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 38 to 48 inches
Reaction: Very strongly acid or strongly acid throughout, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation and iron depletions in the lower part of the profile
Content of clay within the control section: 10 to 18 percent

Ap horizon:
Hue—10YR
Value—4
Chroma—2 or 3
Texture—fine sandy loam

Bw horizon:
Hue—10YR or 7.5YR
Value—5
Chroma—3 to 6
Texture—silt loam, fine sandy loam, or sandy loam

C horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Texture—fine sandy loam, sandy loam, or loamy fine sand

Kinston Series

Depth class: Very deep
Drainage class: Poor
Permeability: Moderate
Landform: Flood plains
Position on landform: Flats and depressions
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Mantachie, Mooreville
- The somewhat poorly drained Mantachie soils are in slightly higher areas on flood plains.

- The moderately well drained Mooreville soils are in higher areas on flood plains. They do not have redoximorphic features in the upper part of the profile.

Taxonomic class: Fine-loamy, siliceous, acid, thermic Typic Fluvaquents

Typical Pedon

Typical pedon of Kinston silt loam, about 5 miles south of DeKalb, 4 miles west of State Highway 39, about 0.5 mile south of a gravel road, in a wooded area; SW¼SW¼ sec. 23, T. 10 N., R. 15 E.

A—0 to 6 inches; brown (10YR 5/3) loam; weak fine granular structure; very friable; many fine roots; few fine and medium brown and black concretions; very strongly acid; clear smooth boundary.

Ag—6 to 12 inches; gray (10YR 5/1) loam; weak fine granular and subangular blocky structure; friable; common fine and medium roots; common fine and medium brown and black concretions; common fine and medium distinct strong brown (7.5YR 5/6) masses of iron accumulation and light gray (10YR 7/2) iron depletions; very strongly acid; clear wavy boundary.

Cg—12 to 50 inches; gray (10YR 6/1) clay loam; weak fine and medium subangular blocky structure; firm, sticky; few fine and medium roots; common fine and medium brown and black concretions; many medium distinct strong brown (7.5YR 5/8) and brownish yellow (10YR 6/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

2Cg—50 to 60 inches; gray (10YR 6/1) loamy sand; single grained; loose; few fine and medium roots; few brown and black concretions; very strongly acid.

Range in Characteristics

Thickness of the solum: 10 to 20 inches

Reaction: Strongly acid or very strongly acid, except for the surface layer in areas that have been limed

Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 6 inches

Content of clay within the control section: 18 to 35 percent

A horizon:
Hue—10YR
Value—5
Chroma—1 to 3
Texture—loam

Cg horizon:
Hue—10YR
Value—5 or 6
Chroma—1 or 2
Texture—clay loam

2Cg horizon:
Hue—10YR
Value—5 or 6
Chroma—1 or 2
Texture—loamy sand

Kipling Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Landform: Uplands
Position on landform: Ridgetops
Parent material: Clayey sediments
Slope range: 0 to 5 percent
Associated soils: Binnsville, Freest, Mayhew, Oktibbeha, Sumter

- All of the associated soils are on uplands.
- Binnsville soils are well drained and are shallow over chalk.
- Freest soils have a fine-loamy control section and are moderately well drained.
- Mayhew soils are poorly drained and are acid throughout the profile.
- Oktibbeha soils are more brown and less gray in the upper part of the subsoil, and they contain more clay.
- Sumter soils are moderately deep over chalk and are alkaline throughout the profile.

Taxonomic class: Fine, montmorillonitic thermic Vertic Paleudalfs

Typical Pedon

Typical pedon of Kipling silty clay loam, 0 to 2 percent slopes, about 0.5 mile west of the Alabama State line, 1,700 feet north of the road, 30 feet west of a small runway, in an area of cropland; NW¼NW¼ sec. 5, T. 10 N., R. 19 E.

Ap—0 to 6 inches; dark brown (10YR 4/3) silty clay loam, mixed with dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4); weak fine granular structure; friable; few fine roots; few brown and black concretions; strongly acid; clear smooth boundary.

Bt1—6 to 14 inches; yellowish brown (10YR 5/4) silty clay; moderate medium subangular and angular blocky structure; firm; few fine roots; few brown and black concretions; common prominent clay films on faces of peds; common medium prominent light brownish gray (2.5Y 6/2) iron depletions and common medium prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bt2—14 to 22 inches; 40 percent yellowish brown (10YR 5/6), 30 percent red (2.5YR 4/8), and 30 percent light

brownish gray (10YR 6/2) silty clay; moderate fine and medium angular and subangular blocky structure; firm; few fine roots; few brown and black concretions; common prominent clay films on faces of peds; red masses of iron accumulation; light brownish gray masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bt3—22 to 33 inches; 40 percent yellowish brown (10YR 5/6), 40 percent light olive gray (5Y 6/2), and 20 percent red (2.5YR 4/6) silty clay; moderate fine and medium angular and subangular blocky structure; firm; few fine roots; few brown and black concretions; common prominent clay films on faces of peds; red masses of iron accumulation; light olive gray iron depletions; very strongly acid; gradual wavy boundary.

Btss—33 to 44 inches; 50 percent gray (10YR 5/1), 25 percent yellowish brown (10YR 5/4), and 25 percent red (2.5YR 5/6) silty clay; weak fine and medium angular and subangular blocky structure; firm; few fine roots; few brown and black concretions; common faint clay films on faces of peds; common fine and medium slickensides that do not intersect; gray iron depletions; yellowish brown and red masses of iron accumulation; strongly acid; gradual wavy boundary.

Bss—44 to 63 inches; yellowish brown (10YR 5/6) clay; common slickensides; breaks to weak fine subangular and angular blocky structure; firm; few fine brown and black concretions; many fine and medium prominent light brownish gray (10YR 6/2) iron depletions; neutral; clear wavy boundary.

Cr—63 to 80 inches; weathered firm chalk.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Extremely acid to medium acid in the A and Bt horizons, very strongly acid to moderately alkaline in the BC and C horizons

Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 6 inches

Content of clay within the control section: 35 to 60 percent

A horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—silt loam or silty clay loam

Bt horizon:
Hue—7.5YR, 10YR, or 2.5Y
Value—4 or 5
Chroma—4 to 8
Texture—silty clay loam, silty clay, clay loam, or clay

Btss and Bss horizons:
Hue—10YR
Value—5 to 7
Chroma—1 to 6
Texture—silty clay or clay

Kirkville Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Broad flats
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Bibb, Jena, Kinston, Mantachie, Mooreville

- All of the associated soils are on flood plains.
- Bibb and Kinston soils are in lower areas and have a grayish matrix within a depth of 10 inches.
- Jena soils are in higher, adjacent areas. They are well drained and do not have iron depletions within a depth of 24 inches.
- Mantachie soils are in slightly lower areas, are somewhat poorly drained, and have a fine-loamy control section.
- Mooreville soils are in similar areas and have a fine-loamy control section.

Taxonomic class: Coarse-loamy, siliceous, thermic Fluvaquentic Dystrochrepts

Typical Pedon

Typical pedon of Kirkville loam, occasionally flooded, about 13 miles south of DeKalb on Highway 39 near the Lauderdale county line, 300 feet east of the highway; SE 1/4SE1/4 sec. 32, T. 9 N., R. 16 E.

Ap—0 to 7 inches; brown (10YR 4/3) loam; weak fine granular structure; friable; common fine roots; very strongly acid; clear smooth boundary.

Bw—7 to 11 inches; dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable; few fine roots; few fine black and brown concretions; few fine faint dark brown (10YR 3/3) stains; very strongly acid; clear wavy boundary.

Bw2—11 to 31 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few fine roots; few fine black and brown concretions; few fine pores; common fine and medium prominent light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear wavy boundary.

Bw3—31 to 43 inches; 40 percent brown (10YR 5/3), 30 percent light brownish gray (10YR 6/2), and 30 percent yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few

fine black and brown concretions; light brownish gray iron depletions; yellowish brown masses of iron accumulation; very strongly acid; clear wavy boundary.

Bg—43 to 65 inches; 40 percent light brownish gray (10YR 6/2), 30 percent yellowish brown (10YR 5/4), and 30 percent strong brown (7.5YR 5/8) loam; weak medium subangular blocky structure; friable; few fine black and brown concretions; light brownish gray iron depletions; strong brown masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation below a depth of 31 inches
Content of clay within the control section: 10 to 18 percent

A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—silt loam or loam

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Texture—loam or fine sandy loam

Bg horizon:
Hue—10YR or 2.5Y
Value—5 or 6
Chroma—2
Texture—loam or sandy loam

Leeper Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Landform: Flood plains
Position on landform: Flats and depressions
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Catalpa, Houlka

- Catalpa soils are in similar landscape positions or are slightly higher on flood plains. They have a mollic epipedon and are moderately well drained.
- Houlka soils are in similar positions on flood plains. They are acid throughout the profile.

Taxonomic class: Fine, montmorillonitic, nonacid, thermic Vertic Epiaquepts

Typical Pedon

Typical pedon of Leeper clay loam, occasionally flooded, about 0.5 mile east of Scooba on Mississippi Highway 16 to U. S. Highway 45, about 2.25 miles northeast on the paved road, 1.5 miles east on paved road, 0.25 mile north on paved road, 450 feet east, in a field; NE¼NE¼ sec. 26, T. 12 N., R. 18 E.

Ap—0 to 4 inches; dark grayish brown (2.5Y 4/2) clay loam; weak and moderate fine granular structure; friable; many fine roots; moderately alkaline; clear smooth boundary.

Bw—4 to 13 inches; dark grayish brown (2.5Y 4/2) clay; moderate medium subangular and angular blocky structure; firm; very plastic and very sticky; few fine roots; pressure faces on some peds; moderately alkaline; clear wavy boundary.

Bss1—13 to 29 inches; dark grayish brown (10YR 4/2) silty clay loam; moderate medium angular blocky structure; firm; pressure faces on many peds that do not intersect; common medium distinct olive brown (2.5Y 4/4) masses of iron accumulation; moderately alkaline; gradual wavy boundary.

Bss2—29 to 49 inches; dark grayish brown (10YR 4/2) clay loam; moderate medium angular blocky structure; firm; stress surfaces on many peds; slickensides that do not intersect; many medium distinct olive brown (2.5Y 4/4) masses of iron accumulation; moderately alkaline; gradual wavy boundary.

Bssg—49 to 72 inches; 50 percent gray (10YR 5/1) and 50 percent yellowish brown (10YR 5/6) silty clay; massive; firm; stress surfaces on many peds; few medium slickensides that do not intersect; gray iron depletions; yellowish brown masses of iron accumulation; moderately alkaline.

Range in Characteristics

Thickness of the solum: 20 to more than 60 inches
Reaction: Medium acid to moderately alkaline
Redoximorphic features: Masses of iron accumulation below a depth of 13 inches
Content of clay within the control section: 35 to 50 percent

A horizon:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—clay loam

Bw and Bss horizons:
Hue—10YR or 2.5Y
Value—4 or 5

Chroma—2
Texture—clay, silty clay, silty clay loam, or clay loam

Cg horizon, if it occurs:
Hue—10YR, 2.5Y, or 5Y
Value—5 to 7
Chroma—1 or 2
Texture—clay, silty clay, silty clay loam, or clay loam

Mantachie Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Broad flats
Parent material: Loamy alluvium
Slope range: 0 to 2 percent
Associated soils: Bibb, Daleville, Jena, Kinston, Mooreville
- All of the associated soils are on flood plains.
- Bibb and Kinston soils, in the lower-lying areas, are poorly drained.
- Daleville soils, which are on low stream terraces and depressions in upland drainageways, are poorly drained.
- The well drained Jena soils, on the higher parts of flood plains, have a coarse-loamy control section.
- Mooreville soils, which are in slightly higher areas, are moderately well drained. They have more brown colors and less gray in the upper part of the subsoil than the Mantachie soils.

Taxonomic class: Fine-loamy, siliceous, acid, thermic Aeric Fluvaquents

Typical Pedon

Typical pedon of Mantachie loam, occasionally flooded, about 1.25 miles east of the Neshoba County line and about 3.25 miles north of the Lauderdale County line, in a pasture; SE¼SW¼ sec. 17, T. 9 N., R. 14 E.

Ap—0 to 8 inches; brown (10YR 5/3) loam; weak fine granular structure; very friable; many fine roots; many fine and medium distinct brown (7.5YR 5/4) stains; very strongly acid; clear smooth boundary.

Bw—8 to 16 inches; 50 percent grayish brownish (10YR 5/2) and 50 percent yellowish brown (10YR 5/6) loam; weak medium subangular blocky and weak fine granular structure; friable; few fine roots; few fine brown and black concretions; light brownish gray iron depletions; yellowish brown masses of iron accumulation; very strongly acid; clear wavy boundary.

Bg1—16 to 22 inches; light brownish gray (10YR 6/2) loam; weak medium subangular blocky structure; friable; few fine roots; few fine brown and black concretions; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bg2—22 to 48 inches; light brownish gray (10YR 6/2) loam; weak medium subangular blocky structure; firm; few fine roots; few fine brown and black concretions; many fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bg3—48 to 61 inches; light brownish gray (10YR 6/2) loam; weak medium subangular blocky structure; firm; few fine roots; few fine brown and black concretions; many fine and medium prominent yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) 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, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation below a depth of 8 inches
Content of clay within the control section: 18 to 35 percent

A horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 6
Texture—loam

Bw horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 6
Texture—loam

Bg horizon:
Hue—10YR
Value—4 to 7
Chroma—1 or 2
Texture—clay loam, loam, or sandy clay loam

Mayhew Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very slow
Landform: Uplands
Position on landform: Ridgetops
Parent material: Acid clayey sediments over clay shale
Slope range: 0 to 2 percent
Associated soils: Kipling, Wilcox

- Kipling soils are in higher positions on uplands. They are browner, have more silt and less clay in the upper part of the Bt horizon, and are better drained than the Mayhew soils.
- Wilcox soils are in higher positions on uplands. They are browner in the upper part of the Bt horizon and are better drained than the Mayhew soils.

Taxonomic class: Fine, montmorillonitic, thermic Chromic Dystraquerts

Typical Pedon

Typical pedon of Mayhew silt loam, 0 to 2 percent slopes, 0.5 mile east of Scooba on Mississippi Highway 16, 1.5 miles northwest on U.S. Highway 45, 100 feet southwest, in a wooded area; NE¼NW¼ sec. 32, T. 12 N., R. 18 E.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; abrupt wavy boundary.

A2—3 to 7 inches; dark grayish brown (10YR 4/2) silty clay loam; weak fine granular and subangular blocky structure; friable; many fine and medium roots; very strongly acid; clear wavy boundary.

Btg1—7 to 13 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium angular and subangular blocky structure; firm; common distinct clay films on faces of peds; few fine and medium roots; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btg2—13 to 31 inches; light brownish gray (2.5Y 6/2) silty clay; moderate medium angular and subangular blocky structure; firm; many distinct clay films and pressure faces on faces of peds; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btss1—31 to 40 inches; grayish brown (2.5Y 5/2) silty clay; strong medium angular blocky structure; firm; many distinct clay films on faces of peds; intersecting slickensides; few fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btss2—40 to 62 inches; grayish brown (2.5Y 5/2) silty clay; strong medium angular blocky structure; firm; many distinct clay films on faces of peds; intersecting slickensides; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 80 inches or more

Reaction: Very strongly acid to moderately acid, except for the surface layer in areas that have been limed

Redoximorphic features: Masses of iron accumulation below a depth of 7 inches

Content of clay within the control section: 35 to 60 percent

A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—silt loam or silty clay loam

Btg and Btss horizons:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Texture—silty clay loam, silty clay, or clay

Mooreville Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Nearly level or undulating areas
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Bibb, Jena, Kinston, Kirkville, Mantachie

- Bibb and Kinston soils, which are in lower positions on flood plains, have gray matrix colors just below the surface horizon. They are poorly drained.
- Jena soils, which are in higher positions on flood plains, have less clay in the control section than the Mooreville soils and do not have iron depletions at as shallow a depth. They are well drained.
- Kirkville soils, in similar positions on flood plains, have a coarse-loamy control section.
- Mantachie soils, which are in lower positions on flood plains, have gray matrix colors within a depth of 20 inches. They are somewhat poorly drained.

Taxonomic class: Fine-loamy, siliceous, thermic Fluvaquentic Dystrochrepts

Typical Pedon

Typical pedon of Mooreville loam, occasionally flooded, about 2.75 miles west of the intersection of Mississippi Highway 495 and Old Jackson Road, about 600 feet northwest, in a pasture; SE¼NW¼ sec. 32, T. 10 N., R. 14 E.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt wavy boundary.

A2—3 to 10 inches; dark brown (10YR 4/3) loam; weak fine granular structure; friable; common fine roots; few fine black and brown concretions; many fine distinct pale brown (10YR 6/3) soft masses; strongly acid; abrupt wavy boundary.

Bw1—10 to 18 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; few fine black and brown concretions; few fine distinct light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

Bw2—18 to 31 inches; yellowish brown (10YR 5/6) loam; weak and moderate medium subangular blocky structure; friable; few fine black and brown concretions; common fine distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Bw3—31 to 43 inches; 60 percent light brownish gray (10YR 6/2) and 40 percent yellowish brown (10YR 5/4 and 5/6) loam; weak and moderate medium subangular blocky structure; friable; many fine black and brown concretions; light brownish gray iron depletions; yellowish brown masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bw4—43 to 60 inches; 60 percent light brownish gray (10YR 6/2) and 40 percent yellowish brown (10YR 5/4 and 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; many fine and medium black and brown concretions; light brownish gray iron depletions; yellowish brown masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Reaction: Very strongly acid or strongly acid, except for the surface layer in areas that have been limed
Redoximorphic features: Iron depletions and masses of iron accumulation below a depth of 10 inches
Content of clay within the control section: 18 to 35 percent

A horizon:
Hue— 10YR
Value—3 to 5
Chroma—2 or 3
Texture—loam

Bw1 horizon:
Hue—10YR
Value—4 or 5
Chroma—3 or 4
Texture—clay loam, loam, or sandy clay loam

Lower part of the Bw horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—clay loam, loam, sandy clay loam, or silty clay loam

Okolona Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Very slow
Landform: Uplands
Position on landform: Broad flats
Parent material: Calcareous clayey material that is underlain by marly clay and chalk
Slope range: 1 to 3 percent
Associated soils: Binnsville, Demopolis, Kipling, Sumter

- All of the associated soils are on uplands.
- Binnsville soils are in adjacent areas and in somewhat steeper areas than the Okolona soils. They have a much thinner, dark A horizon and are shallow over chalk.
- Demopolis soils are shallow over chalk.
- Kipling soils are somewhat poorly drained and are in similar positions.
- Sumter soils, which are mostly on steeper hillsides and ridges, are calcareous throughout. They do not have a thick, dark A horizon.

Taxonomic class: Fine, montmorillonitic, thermic Oxyaquic Hapluderts

Typical Pedon

Typical pedon of Okolona silty clay, 1 to 3 percent slopes, about 5 miles north of Scooba, 1 mile east along a blacktop road, 1/2 mile north along a gravel road, 25 feet east of a pasture fence; NW1/4NW1/4 sec. 15, T. 12 N., R. 18 E.

Ap—0 to 5 inches; very dark grayish brown (10YR 3/2) silty clay; moderate fine granular structure; friable; common fine roots; few fine brown and black concretions; neutral; clear smooth boundary.

A1—5 to 16 inches; very dark grayish brown (10YR 3/2) clay; weak coarse prismatic structure parting to moderate fine and medium angular blocky and granular; firm; few fine roots; few fine black and brown concretions; stress surfaces on faces of peds; neutral; gradual wavy boundary.

A2—16 to 19 inches; very dark grayish brown (10YR 3/2) clay; few fine faint dark grayish brown (10YR 4/2) stains; moderate medium prismatic structure parting to moderate fine and medium angular blocky; firm; few fine roots; few fine black and brown concretions; shiny stress surfaces on faces of some peds; neutral; gradual wavy boundary.

Bss1—19 to 29 inches; dark grayish brown (2.5Y 4/2) clay; some intersecting slickensides that form wedge-shaped aggregates parting to moderate fine and medium angular blocky structure; firm; few fine roots; few fine black and brown concretions; few fine to

coarse calcium carbonate nodules; common fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; slightly effervescent; mildly alkaline; gradual wavy boundary.

Bss2—29 to 43 inches; 60 percent dark grayish brown (2.5Y 4/2), 20 percent olive brown (2.5Y 4/4), and 20 percent yellowish brown (10YR 5/6) clay; intersecting slickensides that form grooved wedge-shaped natural aggregates; firm; few fine roots; common fine black and brown concretions; few fine to coarse calcium carbonate nodules; slightly effervescent; mildly alkaline; gradual wavy boundary.

Bkss—43 to 65 inches; 60 percent dark grayish brown (2.5Y 4/2), 20 percent light olive brown (2.5Y 5/4), and 20 percent yellowish brown (10YR 5/6) clay; intersecting slickensides form wedge-shaped aggregates parting to fine and medium angular blocky structure; very firm; few fine black concretions; common medium and coarse calcium carbonate nodules; slightly effervescent; mildly alkaline.

Range in Characteristics

Thickness of the solum: 40 to more than 65 inches
Reaction: Neutral to moderately alkaline
Redoximorphic features: None
Content of clay within the control section: 40 to 55 percent

A or Ap horizon:
Hue—10YR or 2.5Y
Value—2 or 3
Chroma—2 or 3
Texture—silty clay or clay

Bss horizon:
Hue—2.5Y or 5Y
Value—4 or 5
Chroma—2 to 4
Texture—silty clay or clay

Oktibbeha Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Landform: Uplands
Position on landform: Side slopes
Parent material: Beds of acid clay overlying marly clay or chalk
Slope range: 5 to 12 percent
Associated soils: Binnsville, Demopolis, Kipling
- All of the associated soils are on uplands.
- Binnsville soils have a thicker, dark surface layer.
- Binnsville and Demopolis soils are well drained and are shallow over chalk.
- Kipling soils are somewhat poorly drained and have a fine control section.

Taxonomic class: Very fine, montmorillonitic, thermic Chromic Dystruderts

Typical Pedon

Typical pedon of Oktibbeha silty clay loam, 5 to 8 percent slopes, eroded, about 0.6 mile east of Scooba along Mississippi Highway 16, about 2.2 miles northeast on a paved road, 1.5 miles east on a paved road, 1.5 miles north on a paved road, 0.6 mile northeast on a paved road, 2,200 feet east, in a wooded area; NE¼SE¼ sec. 13, T. 12 N., R. 18 E.

A—0 to 5 inches; dark brown (10YR 4/3) silty clay loam; common fine and medium prominent yellowish red (5YR 4/8) stains; weak fine granular structure; friable; common fine roots; few fine black and brown concretions; strongly acid; clear smooth boundary.

Bt1—5 to 12 inches; yellowish red (5YR 4/8) clay; moderate and strong fine and medium subangular and angular blocky structure; firm; few fine roots; few fine black and brown concretions; some cracks and root holes filled with material from the A horizon; many prominent clay films or pressure faces on faces of peds; few fine and medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Bt2—12 to 17 inches; yellowish red (5YR 4/8) clay; moderate and strong fine and medium subangular and angular blocky structure; firm; few fine roots; few fine black and brown concretions; many prominent clay films or pressure faces on faces of peds; common to many fine to coarse prominent yellowish brown (10YR 5/6) masses of iron accumulation and few fine faint light brownish gray (10YR 6/2) iron depletions below a depth of about 16 inches; very strongly acid; gradual wavy boundary.

Bt3—17 to 28 inches; 60 percent yellowish brown (10YR 5/6), 30 percent yellowish red (5YR 4/6), and 10 percent light brownish gray (2.5Y 6/2) clay; moderate and strong fine and medium subangular and angular blocky structure; firm; few fine roots; few fine black and brown concretions; many prominent clay films or pressure faces on faces of peds; yellowish brown and yellowish red masses of iron accumulation; light brownish iron depletions; very strongly acid; gradual wavy boundary.

Btss1—28 to 44 inches; strong brown (7.5YR 5/8) clay; moderate fine and medium subangular and angular blocky structure; firm; few fine black and brown

concretions; many prominent clay films or pressure faces on faces of peds; common slickensides that do not intersect; few to common fine and medium prominent yellowish brown (10YR 5/6) and yellowish red (5YR 4/6) masses of iron accumulation and light brownish gray (2.5Y 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Bss1—44 to 57 inches; yellowish brown (10YR 5/6) clay; moderate medium and coarse angular blocky and subangular blocky structure; firm; few fine black and brown concretions; common slickensides that intersect; common fine and medium prominent light brownish gray (2.5Y 6/2) iron depletions; neutral; gradual wavy boundary.

Bss2—57 to 70 inches; yellowish brown (10YR 5/6) clay; moderate medium and coarse angular blocky and subangular structure; firm; few fine and medium soft white calcium carbonate nodules; common intersecting slickensides; common fine and medium prominent olive brown (2.5Y 4/4) masses of iron accumulation and olive gray (5Y 5/2) iron depletions; mildly alkaline; calcareous.

Range in Characteristics

Thickness of the solum: More than 60 inches

Reaction: Very strongly acid to slightly acid in the A and B horizons; neutral to moderately alkaline in the C horizon, if it occurs

Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 5 inches

Content of clay within the control section: 60 to 80 percent

A horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—2 to 4
Texture—clay, clay loam, or silty clay loam

Bt1 and Bt2 horizons:
Hue—7.5YR, 5YR, or 2.5YR
Value—4 or 5
Chroma—4 to 8
Texture—clay or silty clay

Bt3 horizon:
Hue—10YR or 7.5YR
Value—5 or 6
Chroma—4 to 8
Texture—clay or silty clay

Bss horizon:
Hue—7.5YR, 10YR, 2.5Y, or 5Y
Value—5 to 7
Chroma—3 to 8
Texture—clay, silty clay, marly clay, or chalk

Ora Series

Depth class: Very deep over bedrock, moderately deep over a fragipan

Drainage class: Moderately well drained

Permeability: Moderate in the upper part of the solum, moderately slow in the fragipan

Landform: Uplands

Position on landform: Ridgetops and side slopes

Parent material: Loamy marine sediments

Slope range: 2 to 12 percent

Associated soils: Ruston, Savannah, Smithdale, Sweatman

- Ruston soils, which are in higher positions on uplands, do not have a fragipan. They are well drained.
- Savannah soils, which are in similar positions on uplands, have a strong brown to yellowish brown Bt horizon.
- Smithdale soils, which are on steeper hillsides in the uplands, do not have a fragipan. They are well drained.
- Sweatman soils, which are in similar positions on steeper hillsides in the uplands, have a clayey argillic horizon and do not have a fragipan. They are well drained.

Taxonomic class: Fine-loamy, siliceous, thermic Typic Fragiudults

Typical Pedon

Typical pedon of Ora fine sandy loam, 5 to 8 percent slopes, eroded, about 3.5 miles northwest of Preston on Mississippi Highway 397, about 1,800 feet east on a paved county road, 50 feet south, in a field; NE¼NE¼ sec. 3, T. 12 N., R. 14 E.

Ap—0 to 7 inches; yellowish brown (10YR 5/4) fine sandy loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt wavy boundary.

Bt1—7 to 12 inches; yellowish red (5YR 4/6) loam; moderate medium subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—12 to 21 inches; yellowish red (5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; very strongly acid; abrupt wavy boundary.

Btx1—21 to 33 inches; yellowish red (5YR 4/6) loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; brittle and compact in about 55 percent of the volume; many distinct clay films on faces of peds; many fine pores; many fine prominent light yellowish brown (10YR 6/4) masses of iron accumulation; very strongly acid; clear wavy boundary.

Btx2—33 to 50 inches; 50 percent dark red (2.5YR 3/6), 30 percent yellowish red (5YR 5/6), and 20 percent pale brown (10YR 6/3) loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; brittle and compact in about 65 percent of the volume; many distinct clay films on faces of peds; many fine pores; yellowish red masses of iron accumulation; pale brown iron depletions; very strongly acid; clear wavy boundary.

Btx3—50 to 68 inches; 50 percent dark red (2.5YR 3/6), 30 percent yellowish red (5YR 5/6), and 20 percent light brownish gray (10YR 6/2) sandy clay loam; weak very coarse prismatic structure parting to moderate medium subangular blocky; very firm; brittle and compact in about 65 percent of the volume; many distinct clay films on faces of peds; many fine pores; yellowish red masses of iron accumulation; light brownish gray iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 48 inches

Reaction: Extremely acid to strongly acid, except for the surface layer in areas that have been limed

Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 21 inches

Content of clay within the control section: 18 to 35 percent

A horizon, if it occurs:
Hue—10YR
Value—3 or 4
Chroma—1 or 2
Texture—fine sandy loam

Ap horizon, if it occurs:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—fine sandy loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—2 to 4
Texture—sandy loam, fine sandy loam, silt loam, or loam

Bt horizon:
Hue—5YR or 2.5YR
Value—4 or 5
Chroma—4 to 8
Texture—clay loam, sandy clay loam, or loam

Btx horizon:
Hue—10YR to 2.5YR
Value—3 to 6
Chroma—2 to 6
Texture—sandy clay loam, loam, or sandy loam

C horizon, if it occurs:
Hue—10YR to 2.5YR
Value—3 to 6
Chroma—2 to 6
Texture—sandy clay loam, loam, or sandy loam

Prentiss Series

Depth class: Very deep over bedrock, moderately deep over a fragipan

Drainage class: Moderately well drained

Permeability: Moderate in the upper part of the solum, moderately slow in the fragipan

Landform: Uplands

Position on landform: Broad flats and ridgetops

Parent material: Marine sediments

Slope range: 0 to 5 percent

Associated soils: Quitman, Savannah, Stough

- The associated soils are on uplands and stream terraces.
- Quitman soils, in similar landscape positions, are less dense and compact in the lower part of subsoil than the Prentiss soils. They have a fine-loamy control section.
- Savannah soils, in similar landscape positions, have a fine-loamy control section.
- Stough soils, in slightly lower positions, are somewhat poorly drained.

Taxonomic class: Coarse-loamy, siliceous, thermic Glossic Fragiudults

Typical Pedon

Typical pedon of Prentiss loam, 0 to 2 percent slopes, about 2,000 feet southeast of Damascus Church, about 2,500 feet east of Mississippi Highway 495, about 300 feet south of the road, in a pasture; NE¼SW¼ sec. 1, T. 9 N., R. 14 E.

Ap—0 to 6 inches; yellowish brown (10YR 5/4) loam; weak fine granular structure; very friable; many fine roots; common dark brown stains; strongly acid; clear smooth boundary.

Bt—6 to 22 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; firm; few fine roots; few fine brown and black concretions; some sand grains bridged and coated with clay; very strongly acid; clear smooth boundary.

Btx1—22 to 31 inches; yellowish brown (10YR 5/6) loam; weak very coarse prismatic structure parting to weak medium subangular blocky; very firm; compact and brittle in about 65 percent of the volume; few fine

roots in gray seams between prisms; few fine clay films on faces of some peds; few fine brown and black concretions; many fine and medium distinct strong brown (7.5YR 5/6) masses of iron accumulation and prominent light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual wavy boundary.

Btx2—31 to 60 inches; 50 percent strong brown (7.5YR 5/6), 30 percent light brownish gray (10YR 6/2), and 20 percent yellowish red (5YR 5/8) loam; weak very coarse prismatic structure parting to weak medium subangular blocky; very firm; compact and brittle in about 70 percent of the volume; few fine roots in gray seams between prisms; few faint clay films on faces of some peds; few fine brown and black concretions; light brownish gray iron depletions; yellowish red 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, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 22 inches
Content of clay within the control section: 5 to 18 percent

A horizon, if it occurs:
Hue—10YR
Value—4 or 5
Chroma—1 to 3
Texture—loam

Ap horizon, if it occurs:
Hue—10YR
Value—4 or 5
Chroma—2 to 6
Texture—loam

E horizon, if it occurs:
Hue—10YR
Value—5 or 6
Chroma—2 to 4
Texture—fine sandy loam, sandy loam, loam, or silt loam

Bt horizon:
Hue—10YR
Value—5 or 6
Chroma—3 to 6
Texture—loam

Btx horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—3 to 6
Texture—loam

Quitman Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Landform: Uplands and stream terraces
Position on landform: Broad flats
Parent material: Loamy marine sediments
Slope range: 0 to 3 percent
Associated soils: Daleville, Prentiss, Savannah, Stough.

- Daleville soils are on low stream terraces that are subject to flooding. They have more gray colors in the upper part of the Bt horizon than the Quitman soils, and they are poorly drained.
- Prentiss soils, which are in higher positions on uplands, have a fragipan. They have less clay in the upper part of the B horizon than the Quitman soils.
- Savannah soils, which are in slightly higher positions on uplands and stream terraces, have a fragipan.
- Stough soils, which are on similar positions on uplands and stream terraces, have less clay in the upper part of the Bt horizon.

Taxonomic class: Fine-loamy, siliceous, thermic Aquic Paleudults

Typical Pedon

Typical pedon of Quitman silt loam, 0 to 2 percent slopes, about 7.5 miles northeast of DeKalb on Mississippi Highway 16 to Dummy Line Road, 0.7 mile northwest on Dummy Line Road, 0.2 mile southwest on a logging road, 45 feet southeast, in a wooded area; NW¼NE¼ sec. 11, T. 11 N., R. 17 E.

A—0 to 2 inches; dark brown (10YR 4/3) silt loam; few fine faint pale brown (10YR 6/3) stains; weak fine granular structure; friable; many fine roots; strongly acid; clear wavy boundary.

E—2 to 7 inches; 60 percent dark brown (10YR 4/3) and 40 percent pale brown (10YR 6/3) silt loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt—7 to 20 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common fine prominent light brownish gray (10YR 6/2) and pale brown (10YR 6/3) iron depletions; very strongly acid; gradual smooth boundary.

Btx1—20 to 47 inches; 60 percent yellowish brown (10YR 5/6), 20 percent light brownish gray (10YR 6/2), and 20 percent strong brown (7.5YR 5/6) loam; moderate coarse prismatic structure parting to moderate medium angular blocky; firm; slightly brittle and compact in the strong brown part, which makes up about 20 percent of the matrix; many prominent clay films on faces of peds; light brownish gray iron

depletions; strong brown masses of iron accumulation; very strongly acid; gradual smooth boundary.
Btx2—47 to 67 inches; 60 percent strong brown (7.5YR 5/6), 20 percent yellowish brown (10YR 5/4), and 20 percent light brownish gray (10YR 6/2) clay loam; moderate coarse prismatic structure parting to strong medium angular blocky; firm; slightly brittle and compact in the strong brown part, which makes up about 15 percent of the matrix; many prominent clay films on faces of peds; light brownish gray iron depletions; strong brown 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, except for the surface layer in areas that have been limed
Redoximorphic features: Iron depletions and masses of iron accumulation below a depth of 7 inches
Content of clay within the control section: 18 to 35 percent

A horizon, if it occurs:
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Texture—silt loam

Ap horizon, if it occurs:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—fine sandy loam, loam, or sandy clay loam

Btx horizon:
Hue—10YR
Value—4 to 6
Chroma—2 to 4
Texture—loam or clay loam

Rosebloom Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Landform: Flood plains
Position on landform: Swales
Parent material: Alluvium
Slope range: 0 to 2 percent
Associated soils: Arkabutla
- Arkabutla soils are in slightly higher positions on flood plains. They are somewhat poorly drained.

Taxonomic class: Fine-silty, mixed, acid, thermic Typic Fluvaquents

Typical Pedon

Typical pedon of Rosebloom silt loam, in an area of Rosebloom-Arkabutla association, frequently flooded; 0.75 mile east of the Neshoba County line on State Highway 16, about 1.25 miles northeast on paved road, 0.25 mile east on a paved road, 0.75 mile northeast on a paved road, 0.75 mile northeast on a logging road, 660 feet northeast in a wooded area in Bogue Chitto Swamp; SE 1/4NW1/4 sec. 20, T. 11 N., R. 14 E.

Ap—0 to 7 inches; 50 percent grayish brown (10YR 5/2) and 50 percent dark yellowish brown (10YR 4/4) silt loam; weak fine granular structure; friable; many fine and medium roots; grayish brown iron depletions; strongly acid; abrupt smooth boundary.
Bg1—7 to 26 inches; light brownish gray (10YR 6/2) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; many fine black and brown concretions; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear smooth boundary.
Bg2—26 to 47 inches; light brownish gray (10YR 6/2) silty clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; many fine black and brown concretions; many medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bg3—47 to 60 inches; gray (10YR 5/1) silty clay loam; moderate medium subangular blocky structure; friable; many fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Reaction: Very strongly acid or strongly acid, except for the surface layer in areas that have been limed
Redoximorphic features: Iron depletions and masses of iron accumulation throughout the profile
Content of clay within the control section: 18 to 35 percent

A or Ap horizon:
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam

Bg horizon:
Hue—10YR
Value—4 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam

C horizon, if it occurs:
Hue—10YR
Value—4 to 7
Chroma—1 or 2
Texture—silt loam or silty clay loam

Ruston Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Uplands
Position on landform: Ridgetops and side slopes
Parent material: Loamy marine sediments
Slope range: 2 to 8 percent
Associated soils: Ora, Smithdale, Sweatman
- All of the associated soils are on uplands.
- Ora soils have a fragipan. They are moderately well drained.
- Smithdale soils have less clay than the Ruston soils and have more sand in the lower part of the Bt horizon.
- Sweatman soils have a clayey control section.

Taxonomic class: Fine-loamy, siliceous, thermic Typic Paleudults

Typical Pedon

Typical pedon of Ruston fine sandy loam, 2 to 5 percent slopes, about 1.75 miles southeast of the Moscow community on Mississippi Highway 493, about 1.6 miles east on a gravel road, 500 feet northwest of the gravel road, in a pasture; SE¼NW¼ sec. 22, T. 10 N., R. 15 E.

Ap—0 to 6 inches; grayish brown (10YR 5/2) fine sandy loam; weak fine granular structure; friable; many fine roots; very strongly acid; abrupt smooth boundary.

Bt1—6 to 18 inches; yellowish red (5YR 5/6) sandy clay loam; moderate fine and medium subangular blocky structure; friable; many fine roots; few faint clay films on faces of peds; sand grains coated and bridged with clay; strongly acid; clear smooth boundary.

Bt2—18 to 42 inches; yellowish red (5YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common faint clay films on faces of peds; sand grains coated and bridged with clay; very strongly acid; clear wavy boundary.

B/E—42 to 50 inches; yellowish red (5YR 5/8) sandy loam (B part); pockets of yellowish brown (10YR 5/4) sandy loam (E part); weak fine subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; mottled areas of uncoated sand; strongly acid; clear wavy boundary.

B't1—50 to 60 inches; yellowish red (5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; many medium prominent yellowish brown (10YR 5/4) masses of iron accumulation; very strongly acid; clear wavy boundary.

B't2—60 to 80 inches; yellowish red (5YR 5/6) fine sandy loam; moderate medium subangular blocky structure; friable; sand grains coated and bridged with clay and oxides; many fine and medium distinct strong brown (7.5YR 5/6) masses of iron accumulation and prominent light gray (10YR 7/2) iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid to moderately acid throughout, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation and iron depletions below a depth of 50 inches
Content of clay within the control section: 18 to 35 percent

Ap horizon:
Hue—10YR or 7.5YR
Value—4 to 6
Chroma—2 to 4
Texture—fine sandy loam, sandy loam, very fine sandy loam, or loamy fine sand

E horizon and E part of the B/E horizon:
Hue—10YR
Value—5 or 6
Chroma—3 or 4
Texture—fine sandy loam, sandy loam, or loamy sand

Bt, B part of the B/E horizon, and B't horizons:
Hue—5YR or 2.5YR
Value—4 or 6
Chroma—4 to 8
Texture—sandy clay loam, loam, fine sandy loam, or clay loam

Savannah Series

Depth class: Very deep over bedrock, moderately deep over a fragipan
Drainage class: Moderately well drained
Permeability: Moderate in the upper part of the subsoil, moderately slow in the fragipan
Landform: Uplands and stream terraces
Position on landform: Ridgetops and side slopes
Parent material: Loamy sediments
Slope range: 0 to 8 percent
Associated soils: Freest, Ora, Prentiss, Quitman, Stough

- Freest soils are in similar positions on uplands. They do not have a fragipan.
- Ora soils are in similar positions on uplands. They have a redder Bt horizon than the Savannah soils.
- Prentiss soils are in similar positions on uplands and stream terraces. They have less clay in the control section and do not have a Bt horizon above the fragipan.
- Quitman soils, which are in similar positions on uplands and stream terraces, have a fragipan.
- Stough soils, which are in lower positions on upland flats and stream terraces, have iron depletions in the upper part of the Bt horizon and have less clay in the Bt horizon than the Savannah soils. They are somewhat poorly drained.

Taxonomic class: Fine-loamy, siliceous, thermic Typic Fragiudults

Typical Pedon

Typical pedon of Savannah fine sandy loam, 0 to 2 percent slopes, about 5.0 miles south of DeKalb on Mississippi Highway 39, about 2.5 miles west on a paved road, about 170 feet north, in a soybean field; SE¼NW¼ sec. 25, T. 10 N., R. 15 E.

Ap—0 to 6 inches; dark brown (10YR 4/3) fine sandy loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt wavy boundary.
E—6 to 12 inches; brown (10YR 5/3) fine sandy loam; weak fine granular and subangular blocky structure; friable; common fine roots; few fillings of A material in root channels; strongly acid; clear wavy boundary.
Bt—12 to 25 inches; yellowish brown (10YR 5/6) sandy clay loam; weak and moderate fine and medium subangular blocky structure; friable; few fine roots; common distinct clay clay films on faces of peds; few fine black and brown concretions in the lower part of the horizon; very strongly acid; clear wavy boundary.
Btx1—25 to 47 inches; 60 percent yellowish brown (10YR 5/4) and 40 percent light brownish gray (10YR 6/2) loam; weak very coarse prismatic structure parting to moderate medium angular and subangular blocky; firm; compact and brittle in over 60 percent of mass; few fine roots in the upper part of horizon; few faint clay films on faces of peds; common fine pores; many fine black and brown concretions; light brownish gray iron depletions; very strongly acid; clear wavy boundary.
Btx2—47 to 60 inches; 50 percent yellowish brown (10YR 5/4), 30 percent light brownish gray (10YR 6/2), and 20 percent yellowish red (5YR 4/6) sandy clay loam; weak very coarse prismatic structure parting to moderate medium angular blocky; firm; compact and brittle in over 60 percent of mass; many prominent clay films on faces of peds; few fine pores; light brownish gray iron depletions; very strongly acid; clear wavy boundary.

Range in Characteristics

Thickness of the solum: 50 to more than 80 inches
Reaction: Extremely acid to strongly acid in all horizons, except for the surface layer in areas that have been limed
Redoximorphic features: Iron depletions below a depth of 25 inches
Content of clay within the control section: 18 to 35 percent

Ap horizon:
Hue—10YR
Value—4
Chroma—2 or 3
Texture—fine sandy loam

E horizon:
Hue—10YR
Value—5
Chroma—2 or 3
Texture—fine sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5
Chroma—4 to 8
Texture—sandy clay loam, clay loam, or loam

Btx horizon:
Hue—10YR
Value—5
Chroma—4 to 8
Texture—sandy clay loam, clay loam, loam, or sandy loam

Smithdale Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Landform: Uplands

Position on landform: Side slopes
Parent material: Loamy material
Slope range: 8 to 40 percent
Associated soils: Ora, Ruston, Sweatman
- The associated soils are on upland side slopes.
- Ora soils are moderately well drained and have a fragipan.
- Ruston soils are fine-loamy in the lower part of the subsoil.
- Sweatman soils have a clayey subsoil.

Taxonomic class: Fine-loamy, siliceous, thermic Typic Hapludults

Typical Pedon

Typical pedon of Smithdale fine sandy loam, 8 to 12 percent slopes, eroded, about 2 miles southwest of Liberty, 2,000 feet south of Mt. Olive cemetery, in a pasture; SE¼SE¼ sec. 8, T. 9 N., R. 15 E.

Ap—0 to 6 inches; dark brown (7.5YR 4/4) fine sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; clear smooth boundary.

Bt1—6 to 20 inches; red (2.5YR 5/6) sandy clay loam; moderate fine and medium subangular blocky structure; firm; few fine roots; many prominent clay films on faces of peds; very strongly acid; gradual smooth boundary.

Bt2—20 to 36 inches; yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; firm; few fine roots; many prominent clay films on faces of peds; very strongly acid; gradual smooth boundary.

Bt3—36 to 60 inches; yellowish red (5YR 5/8) sandy loam; weak fine and medium subangular blocky structure; friable; few fine roots; few distinct clay films on faces of peds; some sand grains bridged and coated with clay; very strongly acid; gradual wavy boundary.

Bt4—60 to 80 inches; yellowish red (5YR 5/6) sandy loam; weak fine subangular blocky structure; friable; few faint clay films on faces of some peds; sand grains bridged and coated with clay and oxides; few fine pockets of clean sand grains; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid, except for the surface layer in areas that have been limed
Redoximorphic features: None
Content of clay within the control section: 18 to 35 percent

A horizon, if it occurs:
Hue—7.5YR or 10YR
Value—4
Chroma—1 to 3
Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

Ap horizon, if it occurs:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—2 to 6
Texture—fine sandy loam, sandy loam, loamy fine sand, or loamy sand

E horizon, if it occurs:
Hue—10YR
Value—5 or 6
Chroma—2 to 4
Texture—fine sandy loam or sandy loam

Bt horizon:
Hue—5YR or 2.5YR
Value—4 or 5
Chroma—6 to 8
Texture—sandy clay loam or sandy loam

Stough Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderately slow
Landform: Uplands and terraces
Position on landform: Broad flats
Parent material: Loamy material
Slope range: 0 to 3 percent
Associated soils: Prentiss, Quitman, Savannah, Wilcox.
- Prentiss soils are in higher positions on uplands and stream terraces. They have a fragipan and have more brown and less gray colors in the upper part of the Bt horizon. They are moderately well drained.
- Quitman soils, which are on similar positions on uplands and stream terraces, have more clay in the upper part of the Bt horizon than the Stough soils.
- Savannah soils, which are in higher positions on uplands and stream terraces, have a fragipan and are browner in the upper part of the Bt horizon than the Stough soils. They are moderately well drained.
- Wilcox soils, which are in similar positions on uplands, have a fine control section.

Taxonomic class: Coarse-loamy, siliceous, thermic, Fragiaquic Paleudults

Typical Pedon

Typical pedon of Stough fine sandy loam, 0 to 2 percent slopes, in a pasture at East Mississippi Junior College, 25 feet west of the baseball field fence, at the right field foul line; SE¼NE¼ sec. 6, T. 11 N., R. 18 E.

Ap1—0 to 3 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; abrupt smooth boundary.

Ap2—3 to 7 inches; brown (10YR 5/3) fine sandy loam; weak fine granular and subangular blocky structure; friable; many fine and medium roots; many fine prominent yellowish red (5YR 4/6) masses of iron accumulation; very strongly acid; abrupt smooth boundary.

Bt—7 to 21 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few black and brown concretions; sand grains bridged and coated with clay and oxides; few faint clay films on faces of peds; few fine prominent light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear wavy boundary.

Btx1—21 to 29 inches; 50 percent yellowish brown (10YR 5/6), 30 percent pale brown (10YR 6/3), and 20 percent light brownish gray(10YR 6/2) fine sandy loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; compact and brittle in about 50 percent of the volume; few fine roots; common fine brown and black concretions; sand grains bridged and coated with clay and oxides; few faint clay films on faces of peds; light brownish gray iron depletions; very strongly acid; gradual wavy boundary.

Btx2—29 to 35 inches; 50 percent yellowish brown (10YR 5/6), 30 percent pale brown (10YR 6/3), and 20 percent light brownish gray (10YR 6/2) fine sandy loam; moderate medium and coarse prismatic structure parting to moderate medium subangular blocky; friable; compact and brittle in about 50 percent of the volume; many black and brown concretions; sand grains coated and bridged with clay and oxides; few faint clay films on faces of peds; light brownish gray iron depletions; very strongly acid; gradual wavy boundary.

Btx3—35 to 55 inches; 40 percent pale brown (10YR 6/3), 30 percent light brownish gray (10YR 6/2), and 30 percent yellowish brown (10YR 5/6) loam; moderate medium prismatic structure parting to weak and moderate medium subangular blocky; friable; compact and brittle in about 50 percent of the volume; many fine black and brown concretions; sand grains coated and bridged with clay and oxides; few faint clay films on faces of peds; light brownish gray iron depletions; very strongly acid; clear wavy boundary.

Btx4—55 to 65 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent light brownish gray (10YR 6/2) sandy clay loam; moderate medium prismatic structure parting to moderate medium subangular blocky; friable; compact and brittle in about 50 percent of the volume; common distinct clay films on faces of peds; few fine faint gray (10YR 5/1) iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except for the surface layer in areas that have been limed
Redoximorphic features: Iron depletions and masses of iron accumulation below a depth of 3 inches
Content of clay within the control section: 8 to 18 percent

A horizon, if it occurs:
Hue—10YR
Value—4
Chroma—1 or 2
Texture—fine sandy loam

Ap horizon, if it occurs:
Hue—10YR
Value—4 or 5
Chroma—2 or 3
Texture—fine sandy loam

Bt horizon:
Hue—10YR
Value—4 to 6
Chroma—4 to 6
Texture—fine sandy loam

Btx horizon:
Hue—10YR
Value—5 to 6
Chroma—4 to 6
Texture—fine sandy loam, loam, sandy loam, or sandy clay loam

Sumter Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Landform: Uplands
Position on landform: Side slopes
Parent material: Marly clay and chalk
Slope range: 5 to 17 percent
Associated soils: Binnsville, Demopolis, Kipling, Okolona

- Binnsville and Demopolis soils are on uplands. They have firm chalk within a depth of 20 inches.
- The very deep Kipling soils, on uplands, are acid in the upper horizons and are more plastic and sticky than the Sumter soils.
- The very deep Okolona soils, on uplands, have a dark A horizon and intersecting slickensides.

Taxonomic class: Fine-silty, carbonatic, thermic Rendollic Eutrocrepts

Typical Pedon

Typical pedon of Sumter silty clay loam, in an area of Sumter-Demopolis complex, 5 to 17 percent slopes, severely eroded; about 1/2 mile southwest of Binnsville, 1,000 yards west of a blacktop road, in a pasture; NE 1/4SE1/4 sec. 12, T. 12 N., R. 18 E.

Ap—0 to 4 inches; 85 percent dark grayish brown (2.5Y 4/2) and 15 percent yellowish brown (10YR 5/6) silty clay loam; moderate fine granular structure; friable; common fine roots; common wormcasts; slightly effervescent; mildly alkaline; clear smooth boundary.

Bw—4 to 21 inches; 85 percent yellowish brown (10YR 5/6) and 15 percent pale brown (10YR 6/3) silty clay loam; moderate fine and medium subangular blocky structure; friable; few fine roots; few wormcasts in the upper part; common fine distinct white calcium carbonate nodules; few fine brown and black concretions; strongly effervescent; mildly alkaline; calcareous; clear wavy boundary.

Cr—21 to 40 inches; light gray (10YR 7/2) firm chalk in horizontal plates; can be dug with spade with some difficulty; violently effervescent.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Reaction: Neutral to moderately alkaline
Redoximorphic features: None
Content of clay within the control section: 35 to 57 percent

A horizon:
Hue—5Y, 2.5Y, or 10YR
Value—3 to 5
Chroma—2 to 6
Texture—silty clay loam

Bw horizon:
Hue—10YR to 5Y
Value—5 to 7
Chroma—3 to 6
Texture—silty clay loam

Cr horizon:
Hue—10YR, 2.5Y, or 5Y
Value—6 to 8
Chroma—1 to 3
Structure—massive or platy rock structure

Sweatman Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Landform: Uplands
Position on landform: Ridgetops and side slopes
Parent material: Marine sediments
Slope range: 2 to 35 percent
Associated soils: Freest, Ora, Ruston, Smithdale, Wilcox

- Freest soils, which are in lower positions on uplands, have a fine-loamy control section and siliceous mineralogy. They are moderately drained.
- Ora soils, which are in similar positions and on less steeply sloping uplands, are fine-loamy in the upper part of the Bt horizon, have siliceous mineralogy, and have a fragipan. They are moderately well drained.
- Ruston soils, which are in similar positions and on less steeply sloping uplands, are fine-loamy in the upper part of the Bt horizon and have siliceous mineralogy.
- Smithdale soils, which are in similar positions on side slopes in the uplands, have less clay in the upper part of the Bt horizon than the Sweatman soils. They have siliceous mineralogy.
- The somewhat poorly drained Wilcox soils are in lower positions on uplands and have a higher base saturation than the Sweatman soils.

Taxonomic class: Clayey, mixed, thermic Typic Hapludults

Typical Pedon

Typical pedon of Sweatman fine sandy loam, in the Sweatman-Smithdale association, 5 to 12 percent slopes; 6 miles southwest on Old Jackson Road, 0.5 mile west on a gravel road, 600 feet southwest, in a wooded area; SW 1/4SE1/4 sec. 16, T. 10 N., R. 15 E.

A—0 to 6 inches; brown (7.5YR 5/4) fine sandy loam; weak fine granular structure; friable; many fine roots; strongly acid; abrupt wavy boundary.

Bt1—6 to 16 inches; yellowish red (5YR 4/6) silty clay; moderate medium angular and subangular blocky structure; firm; common fine roots; many prominent clay films on faces of peds; common fine black and brown concretions; very strongly acid; clear wavy boundary.

Bt2—16 to 26 inches; yellowish red (5YR 5/6) silty clay; moderate medium angular blocky structure; firm; few fine roots; many prominent clay films on faces of peds; common flakes of mica; many fine prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

C1—26 to 35 inches; stratified layers of grayish brown (2.5Y 5/2) and red (2.5YR 4/8) weathered shale and pale brown (10YR 6/3) fine sandy loam; massive; common fine flakes of mica; very strongly acid; gradual wavy boundary.

C2—35 to 60 inches; light brownish gray (2.5Y 6/2) weathered shale; some stratified layers of yellowish brown (10YR 5/6) fine sandy loam; massive; common

fine flakes of mica; many fine prominent red (2.5YR 4/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches but ranges to 48 inches
Reaction: Very strongly acid or strongly acid throughout, except for the surface layer in areas that have been limed
Redoximorphic features: Masses of iron accumulation at a depth of 35 inches
Content of clay within the control section: 35 to 55 percent

A horizon:
Hue—10YR or 7.5YR
Value—3 to 5
Chroma—2 to 4
Texture—fine sandy loam

E horizon, if it occurs:
Hue—10YR
Value—4 to 6
Chroma—1 to 3
Texture—silt loam, loam, or fine sandy loam

Bt horizon:
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—6 or 8
Texture—silty clay loam, silty clay, or clay

BC horizon, if it occurs:
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—6 to 8
Texture—sandy loam, silty clay loam, clay loam, clay, or silty clay

C horizon:
Hue—2.5YR to 2.5Y
Value—4 to 6
Chroma—2 to 8
Texture—stratified layers of fine sandy loam, sandy clay loam, or loam and gray soft weathered shale that is rich in mica

Wilcox Series

Depth class: Deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Landform: Uplands
Position on landform: Broad flats and side slopes
Parent material: Clayey shale
Slope range: 1 to 17 percent
Associated soils: Mayhew, Stough, Sweatman
- Mayhew soils, which are in lower positions on uplands, are mostly gray between the base of the Ap horizon and a depth of 30 inches. They are poorly drained.
- Stough soils, which are in similar positions on uplands, do not have as much clay in the control section as the Wilcox soils. They have siliceous mineralogy.
- Sweatman soils, which are in higher positions on uplands, do not have as high a shrink-swell potential, have a lower base saturation, and are better drained than the Wilcox soils. They have mixed mineralogy.

Taxonomic class: Fine, montmorillonitic, thermic Vertic Hapludalfs

Typical Pedon

Typical pedon of Wilcox silty clay loam, 1 to 2 percent slopes, 3.5 miles east on Mississippi Highway 16 from the intersection of Sucarnoochee Creek and Mississippi Highway 16, about 1,100 feet south on a logging road, 45 feet east, in a wooded area; SE¼NE¼ sec. 15, T. 11 N., R. 17 E.

A—0 to 4 inches; dark brown (10YR 4/3) silty clay loam; moderate medium granular structure; friable; many fine and medium roots; very strongly acid; clear wavy boundary.

Bt1—4 to 8 inches; dark brown (7.5YR 4/4) silty clay; moderate medium angular blocky structure; firm; many fine and medium roots; many prominent clay films on faces of peds; few fine distinct gray (10YR 6/1) iron depletions; very strongly acid; clear wavy boundary.

Bt2—8 to 12 inches; 50 percent dark brown (7.5YR 4/4), 20 percent gray (10YR 6/1), 20 percent red (2.5YR 4/8), and 10 percent grayish brown (2.5Y 5/2) silty clay; moderate medium angular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; gray iron depletions; red masses of iron accumulation; very strongly acid; clear wavy boundary.

Btss1—12 to 35 inches; 40 percent yellowish red (5YR 4/8), 30 percent red (2.5YR 4/8), 20 percent gray (10YR 6/1), and 10 percent grayish brown (2.5Y 5/2) silty clay; moderate medium angular blocky structure; firm; common distinct clay films on faces of peds; few slickensides that do not intersect; gray iron depletions; red masses of iron accumulation; very strongly acid; clear wavy boundary.

Btss2—35 to 42 inches; 60 percent yellowish red (5YR 4/8), 20 percent red (2.5YR 4/8), and 20 percent light brownish gray (10YR 6/2) clay; moderate medium angular blocky structure; firm; common distinct clay

films on faces of peds; few slickensides that do not intersect; light brownish gray iron depletions; red masses of iron accumulation; very strongly acid; clear wavy boundary.

Btss3—42 to 55 inches; 60 percent grayish brownish (2.5Y 5/2), 20 percent light brownish gray (2.5Y 6/2), and 20 percent light olive brown (2.5Y 5/6) clay; moderate medium angular blocky structure; firm; common distinct clay films on faces of peds; slickensides that intersect; many fine to coarse shale fragments in the lower part of the horizon; light brownish gray iron depletions; light olive brown masses of iron accumulation; very strongly acid; clear wavy boundary.

Cr—55 to 70 inches; grayish brown (2.5YR 5/2) and light olive brown (2.5Y 5/6) soft shale.

Range in Characteristics

Thickness of the solum: 26 to 58 inches

Reaction: Strongly acid to extremely acid

Redoximorphic features: Masses of iron accumulation and iron depletions at a depth of 8 inches

Content of clay within the control section: 40 to 60 percent

A horizon:
- Hue—10YR
- Value—3 or 4
- Chroma—1 to 3
- Texture—silty clay loam

Bt and Btss horizons:
- Hue—2.5YR to 2.5Y
- Value—4 to 6
- Chroma—2 to 8
- Texture—silty clay or clay

Cr horizon, if it occurs:
- Hue—10YR, 2.5Y, or 5Y
- Value—4 to 6
- Chroma—1 to 3
- Structure—platy or conchoidal rock structure

Formation of the Soils

In this section, the factors of soil formation are discussed and related to the soils in Kemper County. In addition, the processes of soil formation are described.

Factors of Soil Formation

Soil is the product of the combined effects of the nature of the parent material, climate, living organisms, topography of the area, and time *(5)*. The characteristics of a soil in any area depend upon a combination of these five environmental factors at that particular area. In many areas, however, one or two of the factors are dominant, and they determine most of the properties of a particular soil.

Parent Material

Parent material is the unconsolidated mass in which a soil forms. It largely determines the chemical and mineralogical composition of a soil. The parent materials of the soils in Kemper County are mostly sediments of marine or fluvial origin.

Some of the soils in the northeastern part of Kemper County formed in marl or chalk. These soils are in the Blackland Prairie. Binnsville, Demopolis, and Sumter soils are examples.

The parent material in the steeper areas of the county is derived dominantly from sediments laid down in marine, brackish, and fluvial environments. The particles of these sediments are mixtures of sand, silt, and clay. Smithdale soils formed in this type of parent material.

The soils along the streams in the county formed in alluvium that was washed from the surrounding uplands and redeposited by streams on the flood plains. The alluvial particles are a mixture of sand, silt, and clay. Mantachie, Kirkville, and Jena soils formed in this type of parent material.

Climate

Climate affects the physical, chemical, and biological relationships in the soil, primarily through the influence of precipitation and temperature. Water dissolves minerals, supports biological activity, and transports mineral and organic residue through the soil profile. The amount of water that percolates through the soil over a broad area depends mainly on the rainfall, the relative humidity, and the length of the frost-free period. The amount of downward percolation is also affected by physiographic position and soil permeability. Rainfall is abundant in Kemper County averaging about 56 inches per year. It is slightly greater in spring and summer than in fall and winter.

The warm temperature influences the type and growth of organisms and also affects the speed of physical and chemical reactions in the soil. The climate of Kemper County is warm and moist and presumedly is similar to that existing when the soils formed. Freezing and thawing have very little effect on weathering and soil-forming processes in Kemper County.

Living Organisms

Microorganisms, plants, earthworms, and all other organisms that live on and in the soil have an important effect on the formation of soils. Bacteria, fungi, and other microorganisms aid in weathering rock and in decomposing organic matter. Larger plants alter the soil climate in small areas and thus help to determine the soil microclimate. They also supply organic matter to the soil and transfer elements from the subsoil to the surface soil.

The kinds and numbers of plants and animals that live on and in the soil are determined mainly by climate and, to a varying degree, by parent material, relief, and age of the soil.

Little is known about the fungi and microorganisms in the soils of Kemper County except that they are mostly in the top few inches. Earthworms and other small invertebrates are more active in the surface layer, where they continually mix the soil, than in other layers. Mixing of the soil materials by rodents does not appear to be of much consequence in this county.

Except in bottom land areas, the native vegetation in Kemper County is chiefly oak, hickory, and pine. In the better drained areas of bottom land, the trees are lowland hardwoods, mainly yellow-poplar, sweetgum, ash, and oak. Cypress, birch, blackgum, beech, and water-tolerant oaks grow mainly in the wetter areas of the bottom land.

Man has, 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 insect, disease, and weed control are added to the soil. Soil development is also

affected by constructing levees and dams for flood control, improving drainage, and using various conservation practices.

Relief

The relief, or lay of the land, in Kemper County ranges from nearly level on the flood plains to steep in the uplands. It affects the drainage rate and the rate of runoff. Thus, relief influences the moisture conditions in soils and the erosion that occurs on land surfaces. The rate of runoff is greater on steep slopes than on gentle slopes and in level areas. This means that the amount of water that moves through the soil during development depends partly on the relief. In level areas and in depressions, the soils are likely to be gray and wet.

The formation of fragipans is also associated with relief and drainage. These compact, brittle horizons have the strongest expressions on level to gently sloping topography and under somewhat poorly drained to moderately well drained conditions. Ora and Savannah soils have a fragipan. Fragipans determine the depth that roots, air, and water can penetrate the soils, as well as the permeability and wetness of the soils. In comparison with other factors of soil development, relief and drainage are more local in scope, and their influence on the soil can be observed on small farms. Slope is an important in determining land use, as well as the productivity of crops.

Time

Generally a long period of time is required for formation of soils that have distinct horizons. Thus, the difference in the length of time that parent materials have been in place is commonly reflected in the degree of development of the soil profile.

The soils in Kemper County range from young to old. The young soils have very little profile development, and the older soils have well-expressed soil horizons. Mantachie soils are examples of young soils that lack development. They formed in medium textured to moderately fine textured material on flood plains. Kirkville soils are an example of older soils that formed in alluvium. They are moderately coarse textured to medium textured and have a weakly developed soil profile. Ora soils are an example of older soils that formed in the uplands. They are moderately coarse textured to medium textured and have distinct horizons.

Process of Horizon Differentiation

Several processes were involved in the formation of soil horizons in the soils of Kemper County. These processes include the accumulation of organic matter, the leaching of calcium carbonates and bases, the reduction and transfer of iron, and the formation and translocation of silicate clay minerals. In most of the soils, more than one of these processes have been active in the development of horizons.

The accumulation of organic matter in the upper part of the profile is important because this accumulation results in the formation of an A horizon. The soils in this county have a low content of organic matter.

Carbonates and bases have been leached from nearly all of the soils in Kemper County. This leaching has contributed to the development of horizons. Soil scientists generally agree that leaching of bases from the upper horizons of a soil commonly precedes the translocation of silicate clay minerals. Most of the soils in the county are moderately to strongly leached.

The reduction and transfer of iron, a process called gleying, is evident in poorly drained soils in the county. It is indicated by the grayish color of the horizons below the surface layer. Segregations of iron are indicated in some horizons by reddish-brown mottles and concretions.

In some soils, the translocation of clay minerals has contributed to the development of soil horizons. The eluviated E horizon, which is above the B horizon, is has less clay than the B horizon and generally is lighter in color. The B horizon commonly has accumulations of clay or clay films in pores and on the surfaces of peds. These soils were probably leached of carbonates and soluble salts to a considerable extent before the translocation of silicate clays occurred.

The leaching of bases and subsequent translocation of silicate clays are among the more important processes of horizon differentiation that have taken place in the soils of Kemper County. In Ora and other soils, translocated silicate clays have accumulated in the B horizon in the form of clay films.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Association, soil. A group of soils 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

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 stratifications, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediments.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. The normal flood plain of a stream, subject to flooding.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil. A soil that is, by volume, more than 15 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches along the longest axis. A single piece is called a fragment.

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 film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax vegetation. 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 fragments. If round, mineral or rock particles 2 millimeters to 25 centimeters (10 inches) in diameter; if flat, mineral or rock particles (flagstone) 15 to 38 centimeters (6 to 15 inches) long.

Coarse textured soil. Sand or loamy sand.

Complex slope. Irregular or variable slope. Planning or

establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil 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 are somewhat similar in all areas.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are common compounds in concretions.

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. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are:
Loose.—Noncoherent when dry or moist; does not hold together in a mass.
Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.
Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.
Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.
Sticky.—When wet, adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.
Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.
Soft.—When dry, breaks into powder or individual grains under very slight pressure.
Cemented.—Hard; little affected by moistening.

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.

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.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

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 periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:
Excessively drained.—Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related to wetness.
Somewhat excessively drained.—Water is removed from the soil rapidly. Many somewhat excessively drained soils are sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.
Well drained.—Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well drained soils are commonly medium textured. They are mainly free of mottling.
Moderately well drained.—Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically they are wet long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum or periodically receive high rainfall, or both.
Somewhat poorly drained.—Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.
Poorly drained.—Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough during the growing season that most mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in

layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, nearly continuous rainfall, or a combination of these.

Very poorly drained.—Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients.

Drainage, surface. Runoff, or surface flow of water, from an area.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic)—Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated)—Erosion much more rapid than geologic erosion, mainly as a result of the human or animal activities or of a catastrophe in nature, such as fire, that exposes the surface.

Excess fines (in tables). Excess silt and clay are in the soil. The soil is not a source or gravel or sand for construction purposes.

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.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fine textured soil. Sandy clay, silty clay, or clay.

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.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant that is not a grass or a sedge.

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 and mottles.

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 up to 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water (geology). 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.

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 at the surface of a mineral soil.

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 O, A, or E horizon. The B horizon is, in part, a layer of transition

from the overlying horizon to the underlying C horizon. The B horizon also has distinctive characteristics, such as accumulation of clay, sesquioxides, humus, or a combination of these; prismatic or blocky structure; redder or browner colors than those in the A horizon; or a combination of these. The combined A and B horizons are generally called the solum, or true soil. If a soil does not have a B horizon, the A horizon alone is the solum.

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 A or B horizon. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated rock (unweathered bedrock) beneath the soil. The bedrock commonly underlies a C horizon but can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff. Soils are assigned to four groups. In group A are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They are mainly deep, well drained, and sandy or gravelly. In group D, at the other extreme, are soils having a very slow infiltration rate and thus a high runoff potential. They have a claypan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other material. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained.

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.

Infiltration. The downward entry of water into the immediate surface of soil or other material. This contrasts with percolation, which is movement of water through soil layers or material.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low strength. The soil is not strong enough to support loads.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

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. Mottling generally indicates poor aeration and impeded drainage. 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).

Munsell notation. A designation of color by degrees of the 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 between 6.6 and 7.3. (See Reaction, soil.)

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.

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.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water to move through the profile. Permeability is measured as the number of inches per hour that water moves through the saturated soil. Terms describing permeability are:

Very slow	less than 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 thickness.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Subsurface tunnels or pipelike cavities are formed 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.

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.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Reaction, soil. A measure of the 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:

Extremely acid	below 4.5
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

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 is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Rippable. Rippable bedrock or hardpan can be excavated using a single-tooth ripping attachment mounted on a tractor with a 200-300 drawbar horsepower rating.

Rock fragments. Rock or mineral fragments having a

diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Seepage (in tables). The movement of water through the soil adversely affects the specified use.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer or of the underlying material. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shrink-swell. The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

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 feet.

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.

Slippage (in tables). The soil mass is susceptible to movement downslope when loaded, excavated, or wet.

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.

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

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 underlying material. 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. Breaking up a compact subsoil by pulling a special chisel through the soil.

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 organic matter content than the overlying surface layer.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

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.

Terrace. An embankment, or ridge, constructed on the contour or at a slight angle to the contour across sloping soils. The terrace intercepts surface runoff, so that water soaks into the soil or flows slowly to a prepared outlet.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). An otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

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, such as zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Unstable fill (in tables). There is a risk of caving or sloughing on banks of fill material.

Upland (geology). 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 that are assumed to be inherited from the parent material rather than to be the result of poor drainage.

Weathering. All physical and chemical changes produced by atmospheric agents in rocks or other deposits at or near the earth's surface. These changes result in disintegration and decomposition of the material.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1961-90 at Kipling, Mississippi)

Month	Temperature						Precipitation				
				2 years in 10 will have--				2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	55.2	32.2	43.7	77	5	61	5.26	3.00	7.28	8	0.9
February	60.2	35.2	47.7	81	12	89	5.04	2.69	7.10	6	0.2
March	68.8	42.4	55.6	86	19	222	6.33	3.64	8.73	7	0.1
April	76.8	49.8	63.3	89	29	398	5.56	2.26	8.34	5	0.0
May	82.8	57.6	70.2	93	38	617	4.63	1.89	6.94	6	0.0
June	88.9	64.6	76.7	98	42	795	3.77	1.66	5.58	6	0.0
July	90.9	68.3	79.6	100	56	912	6.00	3.43	8.29	8	0.0
August	90.5	67.6	79.0	98	55	896	3.32	1.75	4.69	5	0.0
September	86.0	62.2	74.1	97	41	718	3.08	1.25	4.62	4	0.0
October	77.0	49.1	63.1	90	28	406	3.01	0.72	4.81	3	0.0
November	67.3	41.5	54.4	83	19	189	4.17	2.17	5.91	5	0.0
December	58.7	35.3	47.0	79	9	93	5.86	3.31	8.13	7	0.3
Yearly:											
Average	75.3	50.5	62.9	---	---	---	---	---	---	---	---
Extreme	104	-4	---	101	3	---	---	---	---	---	---
Total	---	---	---	---	---	5,395	56.03	46.07	65.33	70	1.5

* 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 1961-90 at Kipling, 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--	Mar. 20	Apr. 6	Apr. 15
2 years in 10 later than--	Mar. 14	Apr. 1	Apr. 11
5 years in 10 later than--	Mar. 2	Mar. 22	Apr. 3
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 7	Oct. 23	Oct. 11
2 years in 10 earlier than--	Nov. 13	Oct. 28	Oct. 15
5 years in 10 earlier than--	Nov. 26	Nov. 7	Oct. 25

TABLE 3.--GROWING SEASON

(Recorded in the period 1961-90 at Kipling, 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	229	203	188
8 years in 10	236	210	193
5 years in 10	250	222	202
2 years in 10	263	234	212
1 year in 10	270	240	216

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
Bb	Bibb sandy loam, occasionally flooded	840	0.2
BeB2	Binnsville-Demopolis complex, 2 to 5 percent slopes, eroded	7,500	1.5
Cp	Catalpa silty clay loam, occasionally flooded	6,940	1.4
Da	Daleville sandy loam, frequently flooded	627	0.1
DJ	Daleville-Jena association, frequently flooded	6,900	1.4
DmD3	Demopolis-Rock outcrop, chalk complex, 5 to 12 percent slopes, severely eroded	3,880	0.8
FrA	Freest sandy loam, 0 to 2 percent slopes	4,415	0.9
FrB2	Freest sandy loam, 2 to 5 percent slopes, eroded	3,205	0.7
Ho	Houlka silty clay loam, frequently flooded	9,077	1.9
Je	Jena fine sandy loam, occasionally flooded	3,800	0.8
Kn	Kinston loam, occasionally flooded	4,460	0.9
KpA	Kipling silty clay loam, 0 to 2 percent slopes	6,325	1.3
KpB2	Kipling silty clay loam, 2 to 5 percent slopes, eroded	6,925	1.4
Kr	Kirkville loam, occasionally flooded	760	0.2
Kv	Kirkville loam, frequently flooded	459	0.1
Le	Leeper clay loam, occasionally flooded	4,989	1.0
Ma	Mantachie loam, occasionally flooded	4,208	0.9
Mc	Mantachie loam, frequently flooded	931	0.2
MeA	Mayhew silt loam, 0 to 2 percent slopes	3,668	0.7
Mo	Mooreville loam, occasionally flooded	3,804	0.8
Mr	Mooreville loam, frequently flooded	780	0.2
MV	Mooreville-Kinston-Mantachie association, frequently flooded	10,140	2.1
OaA	Okolona silty clay, 1 to 3 percent slopes	1,540	0.3
ObC3	Oktibbeha silty clay loam, 5 to 8 percent slopes, severely eroded	3,115	0.6
ObD3	Oktibbeha silty clay loam, 8 to 12 percent slopes, severely eroded	1,220	0.2
OrB2	Ora fine sandy loam, 2 to 5 percent slopes, eroded	7,180	1.5
OrC2	Ora fine sandy loam, 5 to 8 percent slopes, eroded	14,224	2.9
OrD2	Ora fine sandy loam, 8 to 12 percent slopes, eroded	2,689	0.5
Pe	Pits-Udorthents complex	654	0.1
PnA	Prentiss loam, 0 to 2 percent slopes	620	0.1
PnB	Prentiss loam, 2 to 5 percent slopes	492	0.1
QaA	Quitman silt loam, 0 to 2 percent slopes	1,687	0.3
QS	Quitman-Stough association, 0 to 3 percent slopes	22,120	4.5
RA	Rosebloom-Arkabutla association, frequently flooded	8,430	1.7
RnB	Ruston fine sandy loam, 2 to 5 percent slopes	3,097	0.6
RnC2	Ruston fine sandy loam, 5 to 8 percent slopes, eroded	8,389	1.7
SaA	Savannah fine sandy loam, 0 to 2 percent slopes	580	0.1
SaB	Savannah fine sandy loam, 2 to 5 percent slopes	6,656	1.4
SaC2	Savannah fine sandy loam, 5 to 8 percent slopes, eroded	4,977	1.0
SeD2	Smithdale fine sandy loam, 8 to 12 percent slopes, eroded	9,452	1.9
SeE2	Smithdale fine sandy loam, 12 to 17 percent slopes, eroded	6,301	1.3
SeF	Smithdale fine sandy loam, 17 to 35 percent slopes	8,394	1.7
SL	Smithdale fine sandy loam, hilly, 8 to 35 percent slopes	29,293	6.0
SR	Smithdale-Ruston association, 5 to 15 percent slopes	4,306	0.9
SS	Smithdale-Ruston association, hilly	8,643	1.8
StA	Stough fine sandy loam, 0 to 2 percent slopes	6,246	1.3
SuE3	Sumter-Demopolis complex, 5 to 17 percent slopes, severely eroded	5,468	1.1
SwB2	Sweatman fine sandy loam, 2 to 5 percent slopes, eroded	6,480	1.3
SwC2	Sweatman fine sandy loam, 5 to 8 percent slopes, eroded	11,762	2.4
SwD2	Sweatman fine sandy loam, 8 to 12 percent slopes, eroded	10,460	2.1
SwF2	Sweatman fine sandy loam, 12 to 30 percent slopes, eroded	4,260	0.9
SX	Sweatman-Smithdale association, 5 to 12 percent slopes	23,082	4.7
SY	Sweatman-Smithdale association, 12 to 35 percent slopes	97,240	19.8
WcA	Wilcox silty clay loam, 1 to 2 percent slopes	5,044	1.0
WcB	Wilcox silty clay loam, 2 to 5 percent slopes	8,916	1.8
WcC2	Wilcox silty clay loam, 5 to 8 percent slopes, eroded	3,816	0.8
WcE2	Wilcox silty clay loam, 8 to 17 percent slopes, eroded	1,150	0.2
WO	Wilcox silty clay loam, 1 to 3 percent slopes	46,740	9.5
WS	Wilcox-Sweatman association, 8 to 17 percent slopes	10,740	2.2
	Total	490,600	100.0

TABLE 5.--PRIME FARMLAND

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
Cp	Catalpa silty clay loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
FrA	Freest sandy loam, 0 to 2 percent slopes
FrB2	Freest sandy loam, 2 to 5 percent slopes, eroded
Je	Jena fine sandy loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
KpA	Kipling silty clay loam, 0 to 2 percent slopes
KpB2	Kipling silty clay loam, 2 to 5 percent slopes, eroded
Kr	Kirkville loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
Le	Leeper clay loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
Ma	Mantachie loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
Mo	Mooreville loam, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
OaA	Okolona silty clay, 1 to 3 percent slopes
OrB2	Ora fine sandy loam, 2 to 5 percent slopes, eroded
PnA	Prentiss loam, 0 to 2 percent slopes
PnB	Prentiss loam, 2 to 5 percent slopes
QaA	Quitman silt loam, 0 to 2 percent slopes
RnB	Ruston fine sandy loam, 2 to 5 percent slopes
SaA	Savannah fine sandy loam, 0 to 2 percent slopes
SaB	Savannah fine sandy loam, 2 to 5 percent slopes
SwB2	Sweatman fine sandy loam, 2 to 5 percent slopes, eroded
WcA	Wilcox silty clay loam, 1 to 2 percent slopes
WcB	Wilcox silty clay loam, 2 to 5 percent slopes
Wo	Wilcox silty clay loam, 1 to 3 percent slopes

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE

(Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Land capability	Cotton lint	Corn	Soybeans	Wheat	Tall fescue	Improved bermuda-grass	Bahiagrass
		Lbs	Bu	Bu	Bu	AUM*	AUM*	AUM*
Bb--Bibb	IIIw	650	75	35	40	9.0	8.5	7.5
BeB2--Binnsville-Demopolis	---	---	---	---	---	---	---	---
Cp--Catalpa	IIw	750	80	40	40	11.0	12.0	8.0
Da--Daleville	Vw	---	---	---	---	4.0	6.0	7.0
DJ**:								
Daleville	Vw	---	---	---	---	4.0	6.0	7.0
Jena	Vw	---	---	---	---	5.0	7.0	8.0
DmD3**--Demopolis-Rock outcrop	---	---	---	---	---	---	---	---
FrA--Freest	IIw	550	70	35	35	7.0	7.0	10.0
FrB2--Freest	IIe	500	60	30	35	7.0	7.0	9.0
Ho--Houlka	IVw	400	80	30	25	6.0	7.0	8.0
Je--Jena	IIw	700	85	40	40	10.0	12.0	10.0
Kn--Kinston	VIw	---	---	---	---	---	---	---
KpA--Kipling	IIIw	550	70	30	35	6.5	8.5	7.0
KpB2--Kipling	IIIe	550	60	25	35	6.5	8.5	7.0
Kr--Kirkville	IIw	700	95	40	40	10.5	11.0	10.0
Kv--Kirkville	Vw	---	---	---	---	8.0	7.0	7.5
Le--Leeper	IIw	750	80	40	40	11.0	12.0	8.0
Ma--Mantachie	IIw	650	90	35	40	10.0	10.0	10.0
Mc--Mantachie	Vw	---	---	---	---	8.0	7.0	8.0

See footnotes at end of table.

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Cotton lint	Corn	Soybeans	Wheat	Tall fescue	Improved bermuda-grass	Bahiagrass
		Lbs	Bu	Bu	Bu	AUM*	AUM*	AUM*
MeA---- Mayhew	IIIw	500	70	30	30	8.0	7.0	8.0
Mo---- Mooreville	IIw	750	90	35	35	12.0	12.0	10.5
Mr---- Mooreville	Vw	---	---	---	---	8.0	7.0	8.0
MV**:								
Mooreville----	Vw	---	---	---	---	8.0	7.0	8.0
Kinston----	VIw	---	---	---	---	---	---	---
Mantachie----	Vw	---	---	---	---	8.0	7.0	8.0
OaA---- Okolona	IIe	650	60	35	45	9.0	10.5	9.0
ObC3, ObD3---- Oktibbeha	VIe	---	---	---	---	6.0	7.0	7.0
OrB2---- Ora	IIe	700	80	35	35	8.0	8.5	9.0
OrC2---- Ora	IIIe	600	70	30	25	7.5	8.0	8.5
OrD2---- Ora	IVe	500	60	20	20	7.0	7.0	8.0
Pe**---- Pits-Udorthents	---	---	---	---	---	---	---	---
PnA---- Prentiss	IIw	750	85	30	40	8.0	9.0	9.0
PnB---- Prentiss	IIe	750	80	30	40	8.0	9.0	9.0
QaA---- Quitman	IIw	650	80	30	35	9.0	10.0	10.0
QS**:								
Quitman----	IIw	650	80	30	35	9.0	10.0	10.0
Stough----	IIw	725	80	25	35	8.0	8.0	8.0
RA**:								
Rosebloom----	Vw	---	---	---	---	7.0	7.0	7.5
Arkabutla----	IVw	400	70	20	25	9.0	10.0	9.0
RnB, RnC2---- Ruston	IIIe	600	65	25	45	10.0	12.0	9.5
SaA---- Savannah	IIw	700	80	35	40	8.0	8.5	9.0
SaB---- Savannah	IIe	650	75	35	40	8.0	8.5	9.0

See footnotes at end of table.

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Cotton lint	Corn	Soybeans	Wheat	Tall fescue	Improved bermuda-grass	Bahiagrass
		Lbs	Bu	Bu	Bu	AUM*	AUM*	AUM*
SaC2---------- Savannah	IIIe	600	70	30	35	7.5	8.0	9.0
SeD2---------- Smithdale	IVe	400	55	25	30	7.5	9.0	8.0
SeE2---------- Smithdale	VIe	---	---	---	---	7.0	9.0	8.0
SeF, SL--------- Smithdale	VIIe	---	---	---	---	---	---	---
SR**:								
Smithdale------	IVe	400	55	25	30	7.5	9.0	8.0
Ruston---------	IIIe	600	65	25	45	10.0	12.0	9.5
SS**:								
Smithdale------	VIIe	---	---	---	---	---	---	---
Ruston---------	IIIe	600	65	25	45	10.0	12.0	9.5
StA---------- Stough	IIw	725	80	25	35	8.0	8.0	8.0
SuE3----------		---	---	---	---			
Sumter---------	VIIe					6.0	7.0	6.5
Demopolis-----	VIe					6.0	6.5	6.5
SwB2---------- Sweatman	IIIe	400	50	20	30	6.5	7.0	6.5
SwC2---------- Sweatman	IVe	400	45	20	20	6.5	6.5	6.0
SwD2---------- Sweatman	VIe	---	---	---	---	6.0	6.0	6.0
SwF2---------- Sweatman	VIIe	---	---	---	---	---	---	---
SX**:								
Sweatman-------	VIe	---	---	---	---	6.0	6.0	6.0
Smithdale------	IVe	400	55	25	30	7.5	9.0	8.0
SY**:								
Sweatman-------	VIIe	---	---	---	---	---	---	---
Smithdale------	VIIe	---	---	---	---	---	---	---
WcA---------- Wilcox	IIIw	400	40	25	30	8.0	8.0	8.5
WcB---------- Wilcox	IIIe	400	40	25	30	7.5	7.5	8.0
WcC2---------- Wilcox	IVe	350	35	20	25	7.0	7.0	7.0

See footnotes at end of table.

TABLE 6.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Cotton lint	Corn	Soybeans	Wheat	Tall fescue	Improved bermuda-grass	Bahiagrass
		Lbs	Bu	Bu	Bu	AUM*	AUM*	AUM*
WcE2---------- Wilcox	VIIe	---	---	---	---	6.0	6.5	5.0
WO---------- Wilcox	IIIe	400	40	25	30	7.5	7.5	8.0
WS**: Wilcox----------	VIIe	---	---	---	---	6.0	6.5	5.0
Sweatman-------	VIe	---	---	---	---	6.0	6.0	6.0

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	Productivity class*	
Bb Bibb	11W	Slight	Severe	Severe	Severe	Loblolly pine Sweetgum Water oak Blackgum Yellow-poplar Atlantic white-cedar	100 90 90 --- --- ---	11 7 6 --- --- ---	Loblolly pine, sweetgum, yellow-poplar, eastern cottonwood.
BeB2**: Binnsville	3D	Slight	Moderate	Severe	Slight	Eastern redcedar	40	3	Eastern redcedar.
Demopolis	3D	Slight	Slight	Severe	Moderate	Eastern redcedar	40	3	Eastern redcedar.
Cp Catalpa	11W	Slight	Moderate	Moderate	Moderate	Eastern cottonwood Green ash Sweetgum American sycamore Hackberry White oak Yellow-poplar	110 90 100 100 --- --- 100	11 4 10 9 --- --- 8	Eastern cottonwood, sweetgum, American sycamore, yellow-poplar.
Da Daleville	10W	Slight	Severe	Severe	Severe	Loblolly pine Sweetgum Water oak Willow oak	95 90 85 80	10 7 6 5	Green ash, loblolly pine, Nuttall oak, Shumard oak, sweetgum.
DJ**: Daleville	10W	Slight	Severe	Severe	Severe	Loblolly pine Sweetgum Water oak Willow oak	95 90 85 80	10 7 6 5	Green ash, loblolly pine, Nuttall oak, Shumard oak, sweetgum.
Jena	11W	Slight	Severe	Moderate	Moderate	Loblolly pine Sweetgum Water oak Slash pine Slash pine	100 90 80 --- ---	11 7 5 --- ---	Loblolly pine, slash pine, American sycamore, eastern cottonwood, green ash.
DmD3**: Demopolis	3D	Slight	Slight	Severe	Moderate	Eastern redcedar	40	3	Eastern redcedar.
Rock outcrop.									
FrA, FrB2 Freest	9W	Slight	Moderate	Slight	Moderate	Loblolly pine Shortleaf pine Slash pine	90 80 85	9 9 11	Loblolly pine, slash pine.

See footnotes at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	Productivity class*	
Ho--- Houlka	11W	Slight	Severe	Severe	Moderate	Sweetgum	105	11	Sweetgum, eastern cottonwood, cherrybark oak, American sycamore, green ash, Nuttall oak.
						Green ash	85	4	
						Eastern cottonwood	105	10	
						Cherrybark oak	105	12	
						Nuttall oak	105	---	
						Shumard oak	105	5	
						American sycamore	100	9	
Je--- Jena	11A	Slight	Slight	Slight	Moderate	Loblolly pine	100	11	Loblolly pine, water oak, slash pine, American sycamore, eastern cottonwood, cherrybark oak, Shumard oak.
						Sweetgum	90	7	
						Water oak	80	5	
						Southern red oak	---	---	
						White oak	---	---	
						Slash pine	---	---	
Kn--- Kinston	9W	Slight	Severe	Severe	Severe	Sweetgum	95	9	Loblolly pine, American sycamore, yellow-poplar, eastern cottonwood, cherrybark oak, green ash, sweetgum.
						Loblolly pine	100	11	
						White oak	90	5	
						Eastern cottonwood	100	9	
						Cherrybark oak	95	5	
KpA, KpB2--- Kipling	9C	Slight	Moderate	Moderate	Moderate	Loblolly pine	90	9	Loblolly pine, cherrybark oak, Shumard oak, sweetgum.
						Cherrybark oak	90	8	
						Shumard oak	85	5	
						Sweetgum	90	7	
						Water oak	80	5	
						White oak	80	4	
Kr--- Kirkville	10W	Slight	Moderate	Moderate	Moderate	Cherrybark oak	100	10	Cherrybark oak, eastern cottonwood, loblolly pine, sweetgum, yellow-poplar.
						Loblolly pine	95	10	
						Sweetgum	100	10	
						Water oak	100	7	
Kv--- Kirkville	10W	Slight	Moderate	Severe	Moderate	Cherrybark oak	100	10	Cherrybark oak, eastern cottonwood, loblolly pine, sweetgum, yellow-poplar.
						Loblolly pine	95	10	
						Sweetgum	100	10	
						Water oak	100	7	
Le--- Leeper	11W	Slight	Moderate	Moderate	Moderate	Eastern cottonwood	110	11	Eastern cottonwood, sweetgum, green ash, American sycamore.
						Sweetgum	95	8	
						Green ash	90	4	
						American sycamore	100	9	

See footnotes at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	Productivity class*	
Ma Mantachie	10W	Slight	Moderate	Moderate	Severe	Loblolly pine Eastern cottonwood Cherrybark oak Green ash Sweetgum Yellow-poplar	98 90 100 80 95 95	10 7 10 4 8 7	Loblolly pine, eastern cottonwood, cherrybark oak, green ash, sweetgum, yellow-poplar.
Mc Mantachie	10W	Slight	Severe	Severe	Severe	Loblolly pine Eastern cottonwood Cherrybark oak Green ash Sweetgum Yellow-poplar	98 90 100 80 95 95	10 7 10 4 8 7	Loblolly pine, eastern cottonwood, cherrybark oak, green ash, sweetgum, yellow-poplar.
MeA Mayhew	9W	Slight	Moderate	Moderate	Severe	Loblolly pine Water oak White oak Sweetgum	90 80 --- 90	9 5 --- 7	Loblolly pine, slash pine, sweetgum.
Mo Mooreville	10A	Slight	Moderate	Moderate	Moderate	Cherrybark oak Eastern cottonwood Green ash Loblolly pine Sweetgum Yellow-poplar	100 105 80 95 100 100	10 10 4 10 10 8	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar.
Mr Mooreville	10W	Slight	Moderate	Severe	Moderate	Cherrybark oak Eastern cottonwood Green ash Loblolly pine Sweetgum Yellow-poplar	100 105 80 95 100 100	10 10 4 10 10 8	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar.
MV**: Mooreville	10W	Slight	Moderate	Severe	Moderate	Cherrybark oak Eastern cottonwood Green ash Loblolly pine Sweetgum Yellow-poplar	100 105 80 95 100 100	10 10 4 10 10 8	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, yellow-poplar.
Kinston	9W	Slight	Severe	Severe	Severe	Sweetgum Loblolly pine White oak Eastern cottonwood Cherrybark oak	95 100 90 100 95	9 11 5 9 5	Loblolly pine, American sycamore, yellow-poplar, eastern cottonwood, cherrybark oak, green ash, sweetgum.

See footnotes at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Potential productivity: Common trees	Site index	Productivity class*	Trees to plant
MV**: Mantachie	10W	Slight	Severe	Severe	Severe	Loblolly pine	98	10	Loblolly pine, eastern cottonwood, cherrybark oak, green ash, sweetgum, yellow-poplar.
						Eastern cottonwood	90	7	
						Cherrybark oak	100	10	
						Green ash	80	4	
						Sweetgum	95	8	
						Yellow-poplar	95	7	
OaA Okolona	3C	Slight	Moderate	Moderate	Slight	Eastern redcedar	40	3	Eastern redcedar.
						Osage-orange	---	---	
ObC3, ObD3 Oktibbeha	7C	Slight	Moderate	Severe	Moderate	Loblolly pine	76	7	Loblolly pine, eastern redcedar.
						Shortleaf pine	66	7	
						Eastern redcedar	45	4	
						Southern red oak	70	4	
OrB2, OrC2, OrD2 Ora	8W	Slight	Slight	Slight	Moderate	Loblolly pine	83	8	Loblolly pine, slash pine.
						Shortleaf pine	69	8	
						Sweetgum	80	6	
PnA, PnB Prentiss	9W	Slight	Slight	Slight	Moderate	Loblolly pine	88	9	Loblolly pine, slash pine.
						Shortleaf pine	79	9	
						Sweetgum	90	7	
						Cherrybark oak	90	8	
						White oak	80	4	
QaA Quitman	10W	Slight	Moderate	Slight	Moderate	Loblolly pine	92	10	Loblolly pine, slash pine, sweetgum, American sycamore, yellow-poplar.
						Slash pine	90	11	
						Sweetgum	93	8	
QS**: Quitman	10W	Slight	Moderate	Slight	Moderate	Loblolly pine	92	10	Loblolly pine, slash pine, sweetgum, American sycamore, yellow-poplar.
						Slash pine	90	11	
						Sweetgum	93	8	
Stough	9W	Slight	Moderate	Slight	Severe	Loblolly pine	90	9	Loblolly pine, slash pine, sweetgum.
						Cherrybark oak	85	7	
						Slash pine	86	11	
						Sweetgum	85	6	
						Water oak	80	5	
RA**: Rosebloom	9W	Slight	Severe	Moderate	Severe	Cherrybark oak	95	9	Cherrybark oak, green ash, eastern cottonwood, Nuttall oak, water oak, willow oak, loblolly pine, sweetgum.
						Green ash	95	4	
						Eastern cottonwood	100	9	
						Nuttall oak	95	---	
						Water oak	95	6	
						Willow oak	90	6	
						Sweetgum	95	8	
						American sycamore	80	6	

See footnotes at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	Productivity class*	
RA**:									
Arkabutla	4W	Slight	Severe	Moderate	Moderate	Cherrybark oak	105	4	Cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, American sycamore.
						Eastern cottonwood	110	---	
						Green ash	95	4	
						Loblolly pine	100	9	
						Nuttall oak	110	---	
						Sweetgum	100	10	
						Water oak	100	---	
RnB, RnC2 Ruston	8A	Slight	Slight	Slight	Slight	Loblolly pine	84	8	Loblolly pine.
						Shortleaf pine	75	8	
						Southern red oak	---	---	
						Post oak	---	---	
						Sweetgum	---	---	
						Hickory	---	---	
SaA, SaB, SaC2 Savannah	8W	Slight	Moderate	Slight	Moderate	Loblolly pine	81	8	Loblolly pine, slash pine.
						Shortleaf pine	76	8	
						Southern red oak	75	4	
SeD2, SeE2 Smithdale	8A	Slight	Slight	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
SeF, SL Smithdale	8R	Moderate	Moderate	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
SR**:									
Smithdale	8A	Slight	Slight	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
Ruston	8A	Slight	Slight	Slight	Slight	Loblolly pine	84	8	Loblolly pine.
						Shortleaf pine	75	8	
						Southern red oak	---	---	
						Post oak	---	---	
						Sweetgum	---	---	
						Hickory	---	---	
SS**:									
Smithdale	8R	Moderate	Moderate	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
Ruston	8A	Slight	Slight	Slight	Slight	Loblolly pine	84	8	Loblolly pine.
						Shortleaf pine	75	8	
						Southern red oak	---	---	
						Post oak	---	---	
						Sweetgum	---	---	
						Hickory	---	---	
StA Stough	9W	Slight	Moderate	Slight	Severe	Loblolly pine	90	9	Loblolly pine, slash pine, sweetgum.
						Cherrybark oak	85	7	
						Slash pine	86	11	
						Sweetgum	85	6	
						Water oak	80	5	
SuE3**:									
Sumter	3C	Slight	Slight	Moderate	Moderate	Eastern redcedar	40	3	Eastern redcedar.

See footnotes at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns				Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	Productivity class*	
SuE3**:									
Demopolis	3D	Slight	Slight	Severe	Moderate	Eastern redcedar	40	3	Eastern redcedar.
SwB2, SwC2, SwD2, Sweatman	8C	Slight	Moderate	Slight	Slight	Loblolly pine	83	8	Loblolly pine, shortleaf pine.
						Shortleaf pine	73	8	
SwF2, Sweatman	8C	Moderate	Moderate	Slight	Slight	Loblolly pine	83	8	Loblolly pine, shortleaf pine.
						Shortleaf pine	73	8	
SX**:									
Sweatman	8C	Slight	Moderate	Slight	Slight	Loblolly pine	83	8	Loblolly pine, shortleaf pine.
						Shortleaf pine	73	8	
Smithdale	8A	Slight	Slight	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
SY**:									
Sweatman	8C	Moderate	Moderate	Slight	Slight	Loblolly pine	83	8	Loblolly pine, shortleaf pine.
						Shortleaf pine	73	8	
Smithdale	8R	Moderate	Moderate	Slight	Slight	Loblolly pine	80	8	Loblolly pine.
						Shortleaf pine	69	8	
WcA, WcB, WcC2, Wilcox	8C	Slight	Moderate	Moderate	Moderate	Loblolly pine	81	8	Loblolly pine.
						Shortleaf pine	68	7	
						Slash pine	85	11	
WcE2, Wilcox	8C	Moderate	Moderate	Moderate	Moderate	Loblolly pine	81	8	Loblolly pine.
						Shortleaf pine	68	7	
						Slash pine	85	11	
WO**, Wilcox	8C	Slight	Moderate	Moderate	Moderate	Loblolly pine	81	8	Loblolly pine.
						Shortleaf pine	68	7	
						Slash pine	85	11	
WS**:									
Wilcox	8C	Moderate	Moderate	Moderate	Moderate	Loblolly pine	81	8	Loblolly pine.
						Shortleaf pine	68	7	
						Slash pine	85	11	
Sweatman	8C	Slight	Moderate	Slight	Slight	Loblolly pine	83	8	Loblolly pine, shortleaf pine.
						Shortleaf pine	73	8	

* Productivity class is the yield in cubic meters per hectare per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION

(Only the soils suitable for production of commercial trees are listed)

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
Bb---------- Bibb	Favorable	1,500	Pinehill bluestem----------	25
	Normal	1,200	Cutover muhly----------	17
	Unfavorable	900	Longleaf uniola----------	17
			Grassleaf goldaster----------	13
			Beaked panicum----------	7
BeB2*: Binnsville----------	Favorable	1,300	Pinehill bluestem----------	30
	Normal	1,000	Sedge----------	20
	Unfavorable	700	Panicum----------	10
Demopolis----------	Favorable	1,300	Pinehill bluestem----------	30
	Normal	1,000	Sedge----------	20
	Unfavorable	700	Panicum----------	10
Cp---------- Catalpa	Favorable	1,500	Longleaf uniola----------	35
	Normal	1,200	Pinehill bluestem----------	20
	Unfavorable	900	Poison ivy----------	10
Da---------- Daleville	Favorable	1,500	Pinehill bluestem----------	25
	Normal	1,200	Cutover muhly----------	17
	Unfavorable	900	Longleaf uniola----------	17
			Beaked panicum----------	9
DJ*: Daleville----------	Favorable	1,500	Pinehill bluestem----------	25
	Normal	1,200	Cutover muhly----------	17
	Unfavorable	900	Longleaf uniola----------	17
			Beaked panicum----------	9
Jena----------	Favorable	2,300	Longleaf uniola----------	35
	Normal	2,000	Panicum----------	30
	Unfavorable	1,700	Pinehill bluestem----------	20
DmD3*: Demopolis----------	Favorable	1,300	Pinehill bluestem----------	30
	Normal	1,000	Sedge----------	20
	Unfavorable	700	Panicum----------	10
Rock outcrop.				
FrA, FrB2---------- Freest	Favorable	1,500	Pinehill bluestem----------	30
	Normal	1,200	Beaked panicum----------	25
	Unfavorable	900	Longleaf uniola----------	15
Ho---------- Houlka	Favorable	1,500	Pinehill bluestem----------	30
	Normal	1,200	Beaked panicum----------	25
	Unfavorable	900	Longleaf uniola----------	15
Je---------- Jena	Favorable	2,300	Longleaf uniola----------	35
	Normal	2,000	Panicum----------	30
	Unfavorable	1,700	Pinehill bluestem----------	20
Kn---------- Kinston	Favorable	1,500	Pinehill bluestem----------	25
	Normal	1,200	Longleaf uniola----------	15
	Unfavorable	900	Beaked panicum----------	15

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
KpA, KpB2	Favorable	1,500	Pinehill bluestem	33
Kipling	Normal	1,200	Common carpetgrass	17
	Unfavorable	900	Panicum	13
Kr, Kv	Favorable	2,100	Switchgrass	25
Kirkville	Normal	1,800	Longleaf uniola	20
	Unfavorable	1,500	Little bluestem	15
			Pinehill bluestem	15
Le	Favorable	1,500	Pinehill bluestem	30
Leeper	Normal	1,200	Longleaf uniola	25
	Unfavorable	900	Panicum	15
Ma, Mc	Favorable	2,300	Longleaf uniola	35
Mantachie	Normal	2,000	Pinehill bluestem	20
	Unfavorable	1,700		
MeA	Favorable	2,300	Longleaf uniola	35
Mayhew	Normal	2,000	Pinehill bluestem	20
	Unfavorable	1,700	Bentawn plumegrass	10
Mo, Mr	Favorable	2,000	Panicum	15
Mooreville	Normal	1,700	Broomsedge bluestem	15
	Unfavorable	1,400	Poison ivy	15
			Pinehill bluestem	10
			Longleaf uniola	10
			Grape	10
			Eastern hophornbeam	10
			Blackberry	5
			Common greenbrier	5
			Honeysuckle	5
MV*:				
Mooreville	Favorable	2,000	Panicum	15
	Normal	1,700	Broomsedge bluestem	15
	Unfavorable	1,400	Poison ivy	15
			Pinehill bluestem	10
			Longleaf uniola	10
			Grape	10
			Eastern hophornbeam	10
			Blackberry	5
			Common greenbrier	5
			Honeysuckle	5
Kinston	Favorable	1,500	Pinehill bluestem	25
	Normal	1,200	Longleaf uniola	15
	Unfavorable	900	Beaked panicum	15
Mantachie	Favorable	2,300	Longleaf uniola	35
	Normal	2,000	Pinehill bluestem	20
	Unfavorable	1,700		
OaA	Favorable	1,500	Pinehill bluestem	30
Okolona	Normal	1,200	Common carpetgrass	5
	Unfavorable	900		
ObC3, ObD3	Favorable	1,500	Pinehill bluestem	35
Oktibbeha	Normal	1,200	Common carpetgrass	30
	Unfavorable	900	Panicum	10

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
OrB2, OrC2, OrD2--- Ora	Favorable	2,300	Longleaf uniola	30
	Normal	2,000	Pinehill bluestem	20
	Unfavorable	1,700	Beaked panicum	15
			Switchgrass	5
			Broomsedge bluestem	5
PnA, PnB Prentiss	Favorable	2,300	Longleaf uniola	30
	Normal	2,000	Pinehill bluestem	25
	Unfavorable	1,700	Beaked panicum	15
QaA Quitman	Favorable	1,500	Pinehill bluestem	30
	Normal	1,200	Longleaf uniola	20
	Unfavorable	900	Beaked panicum	10
QS*:				
Quitman	Favorable	1,500	Pinehill bluestem	30
	Normal	1,200	Longleaf uniola	20
	Unfavorable	900	Beaked panicum	10
Stough	Favorable	1,300	Pinehill bluestem	30
	Normal	1,000	Longleaf uniola	30
	Unfavorable	700	Beaked panicum	15
RA*:				
Rosebloom	Favorable	1,500	Pinehill bluestem	30
	Normal	1,200	Longleaf uniola	20
	Unfavorable	900	Poison ivy	10
Arkabutla	Favorable	1,500	Pinehill bluestem	28
	Normal	1,200	Switchcane	26
	Unfavorable	900	Longleaf uniola	17
RnB, RnC2 Ruston	Favorable	1,500	Longleaf uniola	50
	Normal	1,200	Pinehill bluestem	15
	Unfavorable	900	Beaked panicum	10
			Panicum	10
SaA, SaB, SaC2 Savannah	Favorable	1,300	Longleaf uniola	30
	Normal	1,000	Pinehill bluestem	30
	Unfavorable	700	Beaked panicum	15
			Panicum	10
SeD2, SeE2, SeF, SL Smithdale	Favorable	1,500	Longleaf uniola	30
	Normal	1,200	Pinehill bluestem	17
	Unfavorable	900	Beaked panicum	12
			Panicum	12
SR*, SS*:				
Smithdale	Favorable	1,500	Longleaf uniola	30
	Normal	1,200	Pinehill bluestem	17
	Unfavorable	900	Beaked panicum	12
			Panicum	12
Ruston	Favorable	1,500	Longleaf uniola	50
	Normal	1,200	Pinehill bluestem	15
	Unfavorable	900	Beaked panicum	10
			Panicum	10

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
StA	Favorable	1,300	Pinehill bluestem	30
Stough	Normal	1,000	Longleaf uniola	30
	Unfavorable	700	Beaked panicum	15
SuE3*:				
Sumter	Favorable	1,300	Pinehill bluestem	30
	Normal	1,000	Sedge	20
	Unfavorable	700	Panicum	10
Demopolis	Favorable	1,300	Pinehill bluestem	30
	Normal	1,000	Sedge	20
	Unfavorable	700	Panicum	10
SwB2, SwC2, SwD2, SwF2	Favorable	1,500	Pinehill bluestem	30
Sweatman	Normal	1,200	Beaked panicum	18
	Unfavorable	900	Panicum	15
SX*, SY*:				
Sweatman	Favorable	1,500	Pinehill bluestem	30
	Normal	1,200	Beaked panicum	18
	Unfavorable	900	Panicum	15
Smithdale	Favorable	1,500	Longleaf uniola	30
	Normal	1,200	Pinehill bluestem	17
	Unfavorable	900	Beaked panicum	12
			Panicum	12
WcA, WcB, WcC2, WcE2, WO*	Favorable	1,500	Pinehill bluestem	34
Wilcox	Normal	1,200	Panicum	20
	Unfavorable	900	Beaked panicum	20
WS*:				
Wilcox	Favorable	1,500	Pinehill bluestem	34
	Normal	1,200	Panicum	20
	Unfavorable	900	Beaked panicum	20
Sweatman	Favorable	1,500	Pinehill bluestem	30
	Normal	1,200	Beaked panicum	18
	Unfavorable	900	Panicum	15

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--RECREATIONAL DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Bb Bibb	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
BeB2*: Binnsville	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Slight	Severe: depth to rock.
Demopolis	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: erodes easily.	Severe: depth to rock.
Cp Catalpa	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
Da Daleville	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
DJ*: Daleville	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Jena	Severe: flooding.	Moderate: flooding.	Severe: flooding.	Moderate: flooding.	Severe: flooding.
DmD3*: Demopolis	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: erodes easily.	Severe: depth to rock.
Rock outcrop.					
FrA Freest	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
FrB2 Freest	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
Ho Houlka	Severe: flooding, wetness, percs slowly.	Severe: percs slowly.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
Je Jena	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: flooding.
Kn Kinston	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
KpA Kipling	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
KpB2 Kipling	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
Kr Kirkville	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
Kv Kirkville	Severe: flooding.	Moderate: flooding, wetness.	Severe: flooding.	Moderate: wetness, flooding.	Severe: flooding.
Le Leeper	Severe: flooding, wetness, percs slowly.	Severe: percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, flooding.
Ma Mantachie	Severe: flooding, wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, flooding.
Mc Mantachie	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
MeA Mayhew	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness.
Mo Mooreville	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
Mr Mooreville	Severe: flooding.	Moderate: flooding, wetness.	Severe: flooding.	Moderate: wetness, flooding.	Severe: flooding.
MV*:					
Mooreville	Severe: flooding.	Moderate: flooding, wetness.	Severe: flooding.	Moderate: wetness, flooding.	Severe: flooding.
Kinston	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Mantachie	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
OaA Okolona	Severe: percs slowly, too clayey.	Severe: too clayey, percs slowly.	Severe: too clayey, percs slowly.	Severe: too clayey.	Severe: too clayey.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
ObC3 Oktibbeha	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Slight	Slight.
ObD3 Oktibbeha	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Slight	Moderate: slope.
OrB2 Ora	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight	Moderate: droughty.
OrC2 Ora	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Severe: slope.	Slight	Moderate: droughty.
OrD2 Ora	Moderate: slope, wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: slope.	Slight	Moderate: droughty, slope.
Pe*: Pits.					
Udorthents.					
PnA Prentiss	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Slight	Moderate: droughty.
PnB Prentiss	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight	Moderate: droughty.
QaA Quitman	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
QS*: Quitman	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
Stough	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
RA*: Rosebloom	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Arkabutla	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
RnB Ruston	Slight	Slight	Moderate: slope, small stones.	Slight	Slight.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
RnC2---------- Ruston	Slight----------	Slight----------	Severe: slope.	Slight----------	Slight.
SaA---------- Savannah	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness, droughty.
SaB---------- Savannah	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Moderate: wetness.	Moderate: wetness, droughty.
SaC2---------- Savannah	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Severe: slope.	Moderate: wetness.	Moderate: wetness, droughty.
SeD2, SeE2---------- Smithdale	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight----------	Moderate: slope.
SeF---------- Smithdale	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
SL---------- Smithdale	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
SR*:					
Smithdale----------	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight----------	Moderate: slope.
Ruston----------	Slight----------	Slight----------	Moderate: slope, small stones.	Slight----------	Slight.
SS*:					
Smithdale----------	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Ruston----------	Slight----------	Slight----------	Severe: slope.	Slight----------	Slight.
StA---------- Stough	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
SuE3*:					
Sumter----------	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Severe: erodes easily.	Moderate: slope, depth to rock.
Demopolis----------	Severe: depth to rock.	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: erodes easily.	Severe: depth to rock.
SwB2---------- Sweatman	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Slight----------	Slight.
SwC2---------- Sweatman	Moderate: percs slowly.	Moderate: percs slowly.	Severe: slope.	Slight----------	Slight.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
SwD2 Sweatman	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Slight	Slight.
SwF2 Sweatman	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
SX*: Sweatman	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: slope.
Smithdale	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
SY*: Sweatman	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
Smithdale	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
WcA, WcB Wilcox	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Severe: erodes easily.	Moderate: wetness.
WcC2 Wilcox	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Moderate: wetness.
WcE2 Wilcox	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Moderate: wetness, slope.
WO* Wilcox	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Severe: erodes easily.	Moderate: wetness.
WS*: Wilcox	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Moderate: wetness, slope.
Sweatman	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 10.--WILDLIFE HABITAT

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	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
Bb Bibb	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
BeB2*:										
Binnsville	Poor	Poor	Fair	Fair	Fair	Poor	Very poor.	Poor	Fair	Very poor.
Demopolis	Poor	Poor	Poor	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Cp Catalpa	Fair	Fair	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair.
Da Daleville	Poor	Fair	Fair	Good	Fair	Good	Good	Fair	Good	Good.
DJ*:										
Daleville	Poor	Fair	Fair	Good	Fair	Good	Good	Fair	Good	Good.
Jena	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
DmD3*:										
Demopolis	Poor	Poor	Poor	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
Rock outcrop.										
FrA Freest	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
FrB2 Freest	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Poor.
Ho Houlka	Poor	Fair	Fair	Good	Poor	Fair	Good	Fair	Good	Fair.
Je Jena	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor.
Kn Kinston	Very poor.	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Fair.
KpA Kipling	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.
KpB2 Kipling	Fair	Good	Good	Good	Fair	Poor	Fair	Good	Good	Poor.
Kr Kirkville	Good	Good	Good	Good	Fair	Poor	Poor	Good	Good	Poor.
Kv Kirkville	Poor	Good	Good	Good	Fair	Poor	Poor	Fair	Good	Poor.
Le Leeper	Good	Good	Fair	Good	Poor	Fair	Good	Good	Good	Fair.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	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
Ma Mantachie	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Good	Fair.
Mc Mantachie	Poor	Fair	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair.
MeA Mayhew	Poor	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair.
Mo Mooreville	Good	Good	Good	Good	Fair	Poor	Poor	Good	Good	Poor.
Mr Mooreville	Poor	Fair	Fair	Good	Fair	Poor	Poor	Fair	Good	Poor.
MV*: Mooreville	Poor	Fair	Fair	Good	Fair	Poor	Poor	Fair	Good	Poor.
Kinston	Very poor.	Poor	Poor	Poor	Poor	Good	Fair	Poor	Poor	Fair.
Mantachie	Poor	Fair	Fair	Good	Fair	Fair	Fair	Fair	Good	Fair.
OaA Okolona	Good	Good	Fair	Poor	Good	Poor	Very poor.	Good	Good	Very poor.
ObC3, ObD3 Oktibbeha	Fair	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
OrB2 Ora	Good	Good	Good	Good	Fair	Poor	Poor	Good	Good	Poor.
OrC2, OrD2 Ora	Fair	Good	Good	Good	Fair	Very poor.	Very poor.	Good	Good	Very poor.
Pe*: Pits.										
Udorthents.										
PnA, PnB Prentiss	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
QaA Quitman	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor.
QS*: Quitman	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor.
Stough	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
RA*: Rosebloom	Poor	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good.
Arkabutla	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
RnB Ruston	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	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
RnC2---------- Ruston	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
SaA, SaB---------- Savannah	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SaC2---------- Savannah	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
SeD2, SeE2--------- Smithdale	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
SeF---------- Smithdale	Very poor.	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
SL---------- Smithdale	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
SR*:										
Smithdale---------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Ruston----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
SS*:										
Smithdale---------	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Ruston----------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
StA---------- Stough	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
SuE3*:										
Sumter----------	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
Demopolis---------	Poor	Poor	Poor	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
SwB2---------- Sweatman	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SwC2---------- Sweatman	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SwD2---------- Sweatman	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
SwF2---------- Sweatman	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
SX*:										
Sweatman----------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Smithdale---------	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	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
SY*:										
Sweatman	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Smithdale	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
WcA, WcB Wilcox	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
WcC2, WcE2 Wilcox	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
WO* Wilcox	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor.
WS*:										
Wilcox	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Sweatman	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--BUILDING SITE DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Bb Bibb	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: wetness, flooding.	Severe: wetness.
BeB2*: Binnsville	Severe: depth to rock.	Moderate: shrink-swell, depth to rock.	Severe: depth to rock.	Moderate: shrink-swell, depth to rock.	Severe: low strength.	Severe: depth to rock.
Demopolis	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.
Cp Catalpa	Severe: wetness.	Severe: flooding, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, shrink-swell.	Severe: low strength, flooding, shrink-swell.	Moderate: wetness, flooding.
Da Daleville	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
DJ*: Daleville	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Jena	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.
DmD3*: Demopolis	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope.	Severe: depth to rock.
Rock outcrop.						
FrA, FrB2 Freest	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
Ho Houlka	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, flooding, shrink-swell.	Severe: flooding.
Je Jena	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding.
Kn Kinston	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
KpA, KpB2 Kipling	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
Kr Kirkville	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding.	Moderate: wetness, flooding.
Kv Kirkville	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding.	Severe: flooding.
Le Leeper	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: shrink-swell, low strength, flooding.	Moderate: wetness, flooding.
Ma Mantachie	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding.	Moderate: wetness, flooding.
Mc Mantachie	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding.
MeA Mayhew	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength, wetness.	Severe: wetness.
Mo Mooreville	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: low strength, flooding.	Moderate: wetness, flooding.
Mr Mooreville	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: low strength, flooding.	Severe: flooding.
MV*: Mooreville	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: low strength, flooding.	Severe: flooding.
Kinston	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Mantachie	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding.
OaA Okolona	Severe: cutbanks cave.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: low strength, shrink-swell.	Severe: too clayey.
ObC3 Oktibbeha	Severe: cutbanks cave.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
ObD3 Oktibbeha	Severe: cutbanks cave.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
OrB2 Ora	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: low strength, wetness.	Moderate: droughty.
OrC2 Ora	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: low strength, wetness.	Moderate: droughty.
OrD2 Ora	Severe: wetness.	Moderate: wetness, slope.	Severe: wetness.	Severe: slope.	Moderate: low strength, wetness, slope.	Moderate: droughty, slope.
Pe*: Pits.						
Udorthents.						
PnA, PnB Prentiss	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: droughty.
QaA Quitman	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: low strength, wetness.	Moderate: wetness.
QS*: Quitman	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: low strength, wetness.	Moderate: wetness.
Stough	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
RA*: Rosebloom	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Arkabutla	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, flooding.	Severe: flooding.
RnB Ruston	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Slight.
RnC2 Ruston	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Slight.
SaA, SaB Savannah	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: low strength, wetness.	Moderate: wetness, droughty.
SaC2 Savannah	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness, slope.	Moderate: low strength, wetness.	Moderate: wetness, droughty.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
SeD2, SeE2---- Smithdale	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
SeF, SL---- Smithdale	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
SR*:						
Smithdale----	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
Ruston----	Severe: cutbanks cave.	Slight----	Slight----	Moderate: slope.	Slight----	Slight.
SS*:						
Smithdale----	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
Ruston----	Severe: cutbanks cave.	Slight----	Slight----	Moderate: slope.	Slight----	Slight.
StA---- Stough	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness, droughty.
SuE3*:						
Sumter----	Moderate: depth to rock, too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope, depth to rock.
Demopolis----	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope.	Severe: depth to rock.
SwB2---- Sweatman	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
SwC2---- Sweatman	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Slight.
SwD2---- Sweatman	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
SwF2---- Sweatman	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
SX*:						
Sweatman----	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope.
Smithdale----	Moderate: slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope.
SY*:						
Sweatman----	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
SY*:						
Smithdale	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
WcA, WcB, WcC2 Wilcox	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
WcE2 Wilcox	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: wetness, slope.
WO* Wilcox	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
WS*:						
Wilcox	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: wetness, slope.
Sweatman	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--SANITARY FACILITIES

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Bb Bibb	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: small stones, wetness.
BeB2*: Binnsville	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Demopolis	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock, small stones.
Cp Catalpa	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack.
Da Daleville	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
DJ*: Daleville	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Jena	Severe: flooding.	Severe: seepage, flooding.	Severe: flooding, seepage.	Severe: flooding.	Good.
DmD3*: Demopolis	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock, small stones.
Rock outcrop.					
FrA Freest	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
FrB2 Freest	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
Ho Houlka	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Je Jena	Severe: flooding.	Severe: seepage, flooding.	Severe: flooding, seepage.	Severe: flooding.	Good.
Kn Kinston	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
KpA Kipling	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
KpB2 Kipling	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
Kr, Kv Kirkville	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
Le Leeper	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
Ma, Mc Mantachie	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
MeA Mayhew	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Mo, Mr Mooreville	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: too clayey, wetness.
MV*: Mooreville	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: too clayey, wetness.
Kinston	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Mantachie	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
OaA Okolona	Severe: percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
ObC3 Oktibbeha	Severe: percs slowly.	Moderate: slope.	Severe: too clayey, too acid.	Slight	Poor: too clayey, hard to pack.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
ObD3 Oktibbeha	Severe: percs slowly.	Severe: slope.	Severe: too clayey, too acid.	Moderate: slope.	Poor: too clayey, hard to pack.
OrB2, OrC2 Ora	Severe: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Fair: wetness.
OrD2 Ora	Severe: wetness, percs slowly.	Severe: slope, wetness.	Moderate: wetness, slope.	Moderate: wetness, slope.	Fair: slope, wetness.
Pe*: Pits.					
Udorthents.					
PnA, PnB Prentiss	Severe: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Fair: wetness.
QaA Quitman	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.
QS*: Quitman	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.
Stough	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
RA*: Rosebloom	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Arkabutla	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
RnB, RnC2 Ruston	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too sandy.	Slight	Fair: too sandy.
SaA, SaB, SaC2 Savannah	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.
SeD2, SeE2 Smithdale	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: too clayey, slope.
SeF, SL Smithdale	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
SR*:					
Smithdale	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: too clayey, slope.
Ruston	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too sandy.	Slight	Fair: too sandy.
SS*:					
Smithdale	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
Ruston	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too sandy.	Slight	Fair: too sandy.
StA Stough	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
SuE3*:					
Sumter	Severe: depth to rock, percs slowly.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Demopolis	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock, small stones.
SwB2, SwC2, SwD2 Sweatman	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
SwF2 Sweatman	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
SX*:					
Sweatman	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
Smithdale	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: too clayey, slope.
SY*:					
Sweatman	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
Smithdale	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
WcA Wilcox	Severe: wetness, percs slowly.	Moderate: depth to rock.	Severe: depth to rock, wetness.	Moderate: depth to rock, wetness.	Poor: too clayey, hard to pack.
WcB, WcC2 Wilcox	Severe: wetness, percs slowly.	Moderate: depth to rock, slope.	Severe: depth to rock, wetness.	Moderate: depth to rock, wetness.	Poor: too clayey, hard to pack.
WcE2 Wilcox	Severe: wetness, percs slowly.	Severe: slope.	Severe: depth to rock, wetness.	Moderate: depth to rock, wetness, slope.	Poor: too clayey, hard to pack.
WO* Wilcox	Severe: wetness, percs slowly.	Moderate: depth to rock, slope.	Severe: depth to rock, wetness.	Moderate: depth to rock, wetness.	Poor: too clayey, hard to pack.
WS*: Wilcox	Severe: wetness, percs slowly.	Severe: slope.	Severe: depth to rock, wetness.	Moderate: depth to rock, wetness, slope.	Poor: too clayey, hard to pack.
Sweatman	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 13.--CONSTRUCTION MATERIALS

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
Bb Bibb.	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, area reclaim, wetness.
BeB2*:				
Binnsville	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
Demopolis	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
Cp Catalpa	Poor: low strength, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Da Daleville	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
DJ*:				
Daleville	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
Jena	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
DmD3*:				
Demopolis	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
Rock outcrop.				
FrA, FrB2 Freest	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Ho Houlka	Poor: low strength, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Je Jena	Good	Improbable: excess fines.	Improbable: excess fines.	Good.
Kn Kinston	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
KpA, KpB2 Kipling	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
Kr, Kv Kirkville	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Good.
Le Leeper	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Ma, Mc Mantachie	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
MeA Mayhew	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
Mo, Mr Mooreville	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
MV*: Mooreville	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
Kinston	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
Mantachie	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
OaA Okolona	Poor: low strength, shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
ObC3, ObD3 Oktibbeha	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, too acid.
OrB2, OrC2 Ora	Fair: low strength, thin layer, wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
OrD2 Ora	Fair: low strength, thin layer, wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, slope.
Pe*: Pits.				
Udorthents.				
PnA, PnB Prentiss	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Good.
QaA Quitman	Fair: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
QS*:				
Quitman	Fair: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
Stough	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
RA*:				
Rosebloom	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
Arkabutla	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
RnB, RnC2 Ruston	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
SaA, SaB, SaC2 Savannah	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
SeD2, SeE2 Smithdale	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, slope.
SeF Smithdale	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
SL Smithdale	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
SR*:				
Smithdale	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, slope.
Ruston	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
SS*:				
Smithdale	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
Ruston	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
StA Stough	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
SuE3*:				
Sumter	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
SuE3*:				
Demopolis	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones.
SwB2, SwC2, SwD2 Sweatman	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
SwF2 Sweatman	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
SX*:				
Sweatman	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Smithdale	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, slope.
SY*:				
Sweatman	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
Smithdale	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: slope.
WcA, WcB, WcC2, WcE2, WO* Wilcox	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
WS*:				
Wilcox	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Sweatman	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 14.--WATER MANAGEMENT

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Bb Bibb	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Flooding	Wetness	Erodes easily, wetness.	Wetness, erodes easily.
BeB2*:							
Binnsville	Severe: depth to rock.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, percs slowly.	Depth to rock, erodes easily.	Erodes easily, depth to rock.
Demopolis	Severe: depth to rock.	Severe: thin layer.	Severe: no water.	Deep to water	Depth to rock, slope.	Depth to rock, erodes easily.	Erodes easily, depth to rock.
Cp Catalpa	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.	Percs slowly.
Da Daleville	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly, flooding.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
DJ*:							
Daleville	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly, flooding.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Jena	Severe: seepage.	Severe: piping.	Severe: no water.	Deep to water	Soil blowing, flooding.	Favorable	Favorable.
DmD3*:							
Demopolis	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Depth to rock, slope.	Slope, depth to rock.	Slope, erodes easily.
Rock outcrop.							
FrA Freest	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Wetness, percs slowly.	Percs slowly.
FrB2 Freest	Moderate: slope.	Severe: wetness.	Severe: slow refill.	Percs slowly, slope.	Slope, wetness, percs slowly.	Wetness, percs slowly.	Percs slowly.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Ho Houlka	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.	Wetness, percs slowly.
Je Jena	Severe: seepage.	Severe: piping.	Severe: no water.	Deep to water	Soil blowing, flooding.	Favorable	Favorable.
Kn Kinston	Moderate: seepage.	Severe: wetness.	Slight	Flooding	Wetness, flooding.	Wetness	Wetness.
KpA Kipling	Slight	Severe: hard to pack.	Severe: no water.	Percs slowly	Wetness, percs slowly.	Wetness, percs slowly.	Percs slowly.
KpB2 Kipling	Moderate: slope.	Severe: hard to pack.	Severe: no water.	Percs slowly, slope.	Slope, wetness, percs slowly.	Wetness, percs slowly.	Percs slowly.
Kr, Kv Kirkville	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Flooding	Wetness	Erodes easily, wetness.	Erodes easily.
Le Leeper	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.	Wetness, percs slowly.
Ma, Mc Mantachie	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Flooding	Wetness, flooding.	Wetness	Wetness.
MeA Mayhew	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Erodes easily, wetness.	Wetness, erodes easily.
Mo, Mr Mooreville	Moderate: seepage.	Severe: wetness.	Moderate: slow refill.	Flooding	Wetness, erodes easily, flooding.	Erodes easily, wetness.	Erodes easily.
MV*: Mooreville	Moderate: seepage.	Severe: wetness.	Moderate: slow refill.	Flooding	Wetness, erodes easily, flooding.	Erodes easily, wetness.	Erodes easily.
Kinston	Moderate: seepage.	Severe: wetness.	Slight	Flooding	Wetness, flooding.	Wetness	Wetness.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
MV*:							
Mantachie	Moderate: seepage.	Severe: piping, wetness.	Moderate: slow refill.	Flooding	Wetness, flooding.	Wetness	Wetness.
OaA Okolona	Slight	Severe: hard to pack.	Severe: slow refill.	Deep to water	Slow intake, percs slowly.	Erodes easily, percs slowly.	Erodes easily, percs slowly.
ObC3 Oktibbeha	Moderate: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, percs slowly.	Percs slowly	Percs slowly.
ObD3 Oktibbeha	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, percs slowly.	Slope, percs slowly.
OrB2, OrC2 Ora	Moderate: seepage, slope.	Moderate: piping, wetness.	Severe: no water.	Slope	Slope, wetness, droughty.	Erodes easily, wetness.	Erodes easily, droughty.
OrD2 Ora	Severe: slope.	Moderate: piping, wetness.	Severe: no water.	Slope	Slope, wetness, droughty.	Slope, erodes easily, wetness.	Slope, erodes easily, droughty.
Pe*:							
Pits.							
Udorthents.							
PnA Prentiss	Moderate: seepage.	Severe: piping.	Severe: no water.	Favorable	Wetness, droughty.	Erodes easily, wetness, rooting depth.	Erodes easily, droughty, rooting depth.
PnB Prentiss	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Slope	Slope, wetness, droughty.	Erodes easily, wetness, rooting depth.	Erodes easily, droughty, rooting depth.
QaA Quitman	Slight	Moderate: piping, wetness.	Severe: no water.	Favorable	Wetness	Wetness, soil blowing.	Favorable.
QS*:							
Quitman	Slight	Moderate: piping, wetness.	Severe: no water.	Favorable	Wetness	Wetness, soil blowing.	Favorable.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
QS*: Stough	Slight	Moderate: piping, wetness.	Severe: no water.	Favorable	Wetness, droughty.	Erodes easily, wetness.	Wetness, erodes easily, droughty.
RA*: Rosebloom	Moderate: seepage.	Severe: wetness.	Moderate: slow refill.	Flooding	Wetness, erodes easily, flooding.	Erodes easily, wetness.	Wetness, erodes easily.
Arkabutla	Moderate: seepage.	Severe: wetness.	Moderate: slow refill.	Flooding	Wetness, erodes easily, flooding.	Erodes easily, wetness.	Wetness, erodes easily.
RnB, RnC2 Ruston	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Too sandy, soil blowing.	Favorable.
SaA Savannah	Moderate: seepage.	Severe: piping.	Severe: no water.	Favorable	Wetness, droughty.	Wetness	Rooting depth.
SaB, SaC2 Savannah	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Slope	Slope, wetness, droughty.	Wetness	Rooting depth.
SeD2, SeE2, SeF, SL Smithdale	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope	Slope	Slope.
SR*, SS*: Smithdale	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope	Slope	Slope.
Ruston	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, soil blowing.	Too sandy, soil blowing.	Favorable.
StA Stough	Slight	Moderate: piping, wetness.	Severe: no water.	Favorable	Wetness, droughty.	Erodes easily, wetness.	Wetness, erodes easily, droughty.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
SuE3*:							
Sumter	Severe: slope.	Severe: thin layer.	Severe: no water.	Deep to water	Slope, percs slowly.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
Demopolis	Severe: depth to rock, slope.	Severe: thin layer.	Severe: no water.	Deep to water	Depth to rock, slope.	Slope, depth to rock.	Slope, erodes easily.
SwB2, SwC2, SwD2--Sweatman	Moderate: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope	Favorable	Favorable.
SwF2--Sweatman	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope	Slope	Slope.
SX*, SY*:							
Sweatman	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope	Slope	Slope.
Smithdale	Severe: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Slope	Slope	Slope.
WcA--Wilcox	Moderate: depth to rock.	Severe: hard to pack.	Severe: no water.	Percs slowly	Wetness	Erodes easily, wetness.	Erodes easily, percs slowly.
WcB, WcC2--Wilcox	Moderate: depth to rock, slope.	Severe: hard to pack.	Severe: no water.	Percs slowly, slope.	Slope, wetness.	Erodes easily, wetness.	Erodes easily, percs slowly.
WcE2--Wilcox	Severe: slope.	Severe: hard to pack.	Severe: no water.	Percs slowly, slope.	Slope, wetness.	Slope, erodes easily, wetness.	Slope, erodes easily, percs slowly.
WO*--Wilcox	Moderate: depth to rock.	Severe: hard to pack.	Severe: no water.	Percs slowly	Wetness	Erodes easily, wetness.	Erodes easily, percs slowly.
WS*:							
Wilcox	Severe: slope.	Severe: hard to pack.	Severe: no water.	Percs slowly, slope.	Slope, wetness.	Slope, erodes easily, wetness.	Slope, erodes easily, percs slowly.
Sweatman	Severe: slope.	Severe: hard to pack.	Severe: no water.	Deep to water	Slope	Slope	Slope.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 15.--ENGINEERING INDEX PROPERTIES

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
Bb Bibb	0-4	Sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	95-100	90-100	60-90	30-60	<25	NP-7
	4-70	Sandy loam, loam, silt loam.	SM, SC-SM, ML, CL-ML	A-2, A-4	60-100	50-100	40-100	30-90	<30	NP-7
BeB2*: Binnsville	0-6	Silty clay loam	CL, CH	A-7	90-100	80-100	75-100	70-95	44-57	22-32
	6-12	Silty clay loam, silty clay.	CL, CH	A-7	60-90	60-90	60-90	60-90	44-57	22-32
	12-30	Weathered bedrock	---	---	---	---	---	---	---	---
Demopolis	0-4	Silty clay loam	CL, CL-ML	A-4, A-6, A-7	85-100	75-90	65-85	50-80	24-44	6-20
	4-9	Channery loam, channery clay loam, extremely channery silty clay loam.	GC, GM-GC, GP-GC	A-2, A-1	20-30	15-25	10-20	8-15	18-38	4-14
	9-40	Weathered bedrock	---	---	---	---	---	---	---	---
Cp Catalpa	0-7	Silty clay loam	CL, CH	A-7	100	100	95-100	85-100	45-52	24-30
	7-64	Silty clay, clay, silty clay loam.	CH	A-7	100	100	95-100	85-100	50-75	28-50
Da Daleville	0-7	Sandy loam	ML, CL-ML, SC-SM, SM	A-4	100	100	70-85	40-60	<30	NP-7
	7-60	Clay loam, loam, sandy clay loam.	CL	A-6	100	100	90-100	70-80	28-38	11-20
DJ*: Daleville	0-9	Sandy loam	ML, CL-ML, SC-SM, SM	A-4	100	100	70-85	40-60	<30	NP-7
	9-70	Clay loam, loam, sandy clay loam.	CL	A-6	100	100	90-100	70-80	28-38	11-20
Jena	0-7	Fine sandy loam	ML, SM, CL-ML, SC-SM	A-4, A-2-4	100	100	60-85	25-55	10-28	NP-10
	7-44	Silt loam, very fine sandy loam, loam.	CL, CL-ML, SC-SM	A-4, A-2-4	100	100	55-90	25-70	15-30	5-10
	44-60	Fine sandy loam, sandy loam, loamy fine sand.	SM	A-2-4, A-4	100	100	50-80	20-50	<20	NP
DmD3*: Demopolis	0-4	Silty clay loam	CL, CL-ML	A-4, A-6, A-7	85-100	75-90	65-85	50-80	24-44	6-20
	4-14	Channery loam, channery clay loam, extremely channery silty clay loam.	GC, GM-GC, GP-GC	A-2, A-1	20-30	15-25	10-20	8-15	18-38	4-14
	14-40	Weathered bedrock	---	---	---	---	---	---	---	---
Rock outcrop.										

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
FrA, FrB2--------- Freest	0-9	Sandy loam--------	SM, CL, ML, CL-ML	A-4	100	95-100	60-90	40-70	<30	NP-8
	9-23	Loam, sandy clay loam.	CL	A-4, A-6	100	95-100	80-95	55-75	25-40	7-20
	23-66	Clay loam, clay, silty clay.	CL, CH	A-7	100	95-100	90-100	80-95	41-55	20-30
Ho--------------- Houlka	0-3	Silty clay loam	CH, CL	A-7	100	100	80-95	55-95	45-55	25-35
	3-81	Clay, silty clay, clay loam.	CH	A-7	100	100	95-100	80-97	52-75	30-50
Je--------------- Jena	0-6	Fine sandy loam	ML, SM, CL-ML, SC-SM	A-4, A-2-4	100	100	60-85	25-55	10-28	NP-10
	6-39	Silt loam, fine sandy loam, loam.	CL, CL-ML, SC-SM	A-4, A-2-4	100	100	55-90	25-70	15-30	5-10
	39-65	Fine sandy loam, sandy loam, loamy fine sand.	SM	A-2-4, A-4	100	100	50-80	20-50	<20	NP
Kn--------------- Kinston	0-12	Loam--------------	ML, CL, CL-ML	A-4, A-6	100	98-100	85-100	50-97	17-40	4-15
	12-50	Loam, clay loam, sandy clay loam.	CL	A-4, A-6, A-7	100	95-100	75-100	60-95	20-45	8-22
	50-60	Variable----------	---	---	---	---	---	---	---	---
KpA, KpB2--------- Kipling	0-6	Silty clay loam	CL	A-6, A-7	100	100	95-100	85-95	30-45	15-25
	6-33	Silty clay, clay, silty clay loam.	CH, CL	A-7, A-6	100	100	95-100	85-95	38-70	22-45
	33-63	Clay, silty clay	CH, CL	A-7	100	100	90-100	75-95	48-80	26-50
Kr--------------- Kirkville	0-7	Loam--------------	SM, ML, CL-ML, SC-SM	A-2, A-4	100	100	85-100	30-70	<20	NP-5
	7-65	Loam, sandy loam, fine sandy loam.	ML, SM, CL-ML, SC-SM	A-2, A-4	100	100	60-100	30-65	<20	NP-5
Kv--------------- Kirkville	0-4	Loam--------------	SM, ML, CL-ML, SC-SM	A-2, A-4	100	100	85-100	30-70	<20	NP-5
	4-65	Loam, sandy loam, fine sandy loam.	ML, SM, CL-ML, SC-SM	A-2, A-4	100	100	60-100	30-65	<20	NP-5
Le--------------- Leeper	0-4	Clay loam---------	CH, CL	A-7	100	100	90-100	85-95	45-55	25-35
	4-72	Clay, silty clay, silty clay loam.	CH	A-7	100	100	95-100	80-97	52-75	30-50
Ma, Mc----------- Mantachie	0-8	Loam--------------	CL-ML, SC-SM, SM, ML	A-4	95-100	90-100	60-85	40-60	<20	NP-5
	8-61	Loam, clay loam, sandy clay loam.	CL, SC, SC-SM, CL-ML	A-4, A-6	95-100	90-100	80-95	45-80	20-40	5-15

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
MeA---------- Mayhew	0-3	Silt loam--------	CL	A-6, A-7	100	100	90-100	70-95	36-50	15-28
	3-40	Silty clay loam, silty clay, clay.	CH, CL	A-7	100	100	95-100	85-95	46-75	25-50
	40-62	Silty clay, clay, silty clay loam.	CH, CL	A-7	100	90-100	90-100	75-90	45-80	25-50
Mo---------- Mooreville	0-10	Loam----------	CL-ML, CL, SC-SM, SC	A-4	100	100	80-100	40-85	20-30	5-10
	10-43	Sandy clay loam, clay loam, loam.	CL, SC	A-6, A-7	100	100	80-95	45-80	28-50	15-30
	43-60	Loam, sandy clay loam, clay loam.	SC, CL	A-6, A-7	100	100	80-95	45-80	28-50	15-30
Mr---------- Mooreville	0-4	Loam----------	CL-ML, CL, SC-SM, SC	A-4	100	100	80-100	40-85	20-30	5-10
	4-28	Sandy clay loam, clay loam, loam.	CL, SC	A-6, A-7	100	100	80-95	45-80	28-50	15-30
	28-61	Loam, sandy clay loam, clay loam.	SC, CL	A-6, A-7	100	100	80-95	45-80	28-50	15-30
MV*: Mooreville------	0-10	Loam----------	CL-ML, CL, SC-SM, SC	A-4	100	100	80-100	40-85	20-30	5-10
	10-43	Sandy clay loam, clay loam, loam.	CL, SC	A-6, A-7	100	100	80-95	45-80	28-50	15-30
	43-60	Loam, sandy clay loam, clay loam.	SC, CL	A-6, A-7	100	100	80-95	45-80	28-50	15-30
Kinston---------	0-12	Loam----------	ML, CL, CL-ML	A-4, A-6	100	98-100	85-100	50-97	17-40	4-15
	12-50	Loam, clay loam, sandy clay loam.	CL	A-4, A-6, A-7	100	95-100	75-100	60-95	20-45	8-22
	50-60	Variable---------	---	---	---	---	---	---	---	---
Mantachie-------	0-8	Loam----------	CL-ML, SC-SM, SM, ML	A-4	95-100	90-100	60-85	40-60	<20	NP-5
	8-61	Loam, clay loam, sandy clay loam.	CL, SC, SC-SM, CL-ML	A-4, A-6	95-100	90-100	80-95	45-80	20-40	5-15
OaA---------- Okolona	0-5	Silty clay-------	CL, CH	A-7	100	100	95-100	85-95	46-55	25-32
	5-65	Silty clay, clay	CH	A-7	95-100	95-100	95-100	90-95	60-90	36-65
ObC3---------- Oktibbeha	0-5	Silty clay loam	CL	A-6, A-7	100	100	90-100	75-95	32-50	20-30
	5-28	Clay----------	CH	A-7	100	100	95-100	95-100	55-75	35-50
	28-57	Clay----------	CH	A-7	100	100	95-100	95-100	55-75	35-50
	57-70	Clay, silty clay	CL	A-7	100	100	90-100	90-100	42-65	30-45
ObD3---------- Oktibbeha	0-2	Silty clay loam	CL	A-6, A-7	100	100	90-100	75-95	32-50	20-30
	2-12	Clay----------	CH	A-7	100	100	95-100	95-100	55-75	35-50
	12-46	Clay----------	CH	A-7	100	100	95-100	95-100	55-75	35-50
	46-60	Clay, silty clay	CL	A-7	100	100	90-100	90-100	42-65	30-45

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
OrB2, Ora	0-5	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-4, A-2	100	95-100	65-85	30-65	<30	NP-5
	5-22	Clay loam, sandy clay loam, loam.	CL	A-6, A-4, A-7	100	95-100	80-100	50-80	25-48	8-22
	22-56	Sandy clay loam, loam, sandy loam.	CL	A-6, A-7, A-4	100	95-100	80-100	50-75	25-43	8-25
	56-65	Sandy clay loam, loam, sandy loam.	CL	A-6, A-7	100	95-100	80-98	50-60	30-49	11-30
OrC2, OrD2, Ora	0-7	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-4, A-2	100	95-100	65-85	30-65	<30	NP-5
	7-21	Clay loam, sandy clay loam, loam.	CL	A-6, A-4, A-7	100	95-100	80-100	50-80	25-48	8-22
	21-50	Sandy clay loam, loam, sandy loam.	CL	A-6, A-7, A-4	100	95-100	80-100	50-75	25-43	8-25
	50-68	Sandy clay loam, loam, sandy loam.	CL	A-6, A-7	100	95-100	80-98	50-60	30-49	11-30
Pe*:										
Pits.										
Udorthents.										
PnA, PnB, Prentiss	0-6	Loam	ML, CL, CL-ML	A-4	100	100	75-100	50-90	<30	NP-10
	6-22	Loam, silt loam, fine sandy loam.	ML, CL, CL-ML	A-4, A-2	100	100	75-100	50-90	<30	NP-10
	22-60	Loam, sandy loam, fine sandy loam.	CL-ML, CL, SC, SC-SM	A-6, A-4	100	100	70-100	40-75	20-35	4-12
QaA, Quitman	0-7	Silt loam	SM, ML	A-4, A-2	100	100	85-100	30-55	<20	NP-3
	7-20	Fine sandy loam, loam, sandy clay loam.	SC, CL, CL-ML, SC-SM	A-4, A-6	100	100	90-100	40-70	20-35	4-15
	20-67	Sandy clay loam, loam, clay loam.	CL, SC	A-6, A-7	100	100	90-100	40-65	25-45	11-20
QS*:										
Quitman	0-7	Silt loam	SM, ML	A-4, A-2	100	100	85-100	30-55	<20	NP-3
	7-20	Fine sandy loam, loam, sandy clay loam.	SC, CL, CL-ML, SC-SM	A-4, A-6	100	100	90-100	40-70	20-35	4-15
	20-67	Sandy clay loam, loam, clay loam.	CL, SC	A-6, A-7	100	100	90-100	40-65	25-45	11-20
Stough	0-7	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-4	100	100	65-85	35-65	<25	NP-7
	7-21	Loam, fine sandy loam, sandy loam.	ML, CL, CL-ML	A-4	100	100	75-95	50-75	<25	8-15
	21-65	Sandy loam, sandy clay loam, loam.	SC, SL	A-4, A-6	100	100	65-90	40-65	25-40	NP-7
RA*:										
Rosebloom	0-7	Silt loam	CL	A-4, A-6	100	100	90-100	80-95	28-40	9-20
	7-60	Silt loam, silty clay loam.	CL	A-4, A-6	100	100	90-100	85-100	28-40	9-20

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
RA*:										
Arkabutla	0-5	Silt loam	CL, CL-ML	A-4, A-6	100	100	85-100	60-95	25-35	7-15
	5-60	Silty clay loam, loam, silt loam.	CL	A-6, A-7	100	100	85-100	70-90	30-45	12-25
RnB, RnC2 Ruston	0-6	Fine sandy loam	SM, ML, CL-ML	A-4, A-2-4	100	85-100	65-85	30-55	<20	NP-7
	6-42	Sandy clay loam, loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
	42-50	Fine sandy loam, sandy loam, loamy sand.	SM, ML, CL-ML, SC-SM	A-4, A-2-4	100	85-100	65-85	30-75	<27	NP-7
	50-80	Sandy clay loam, fine sandy loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
SaA, SaB, SaC2--- Savannah	0-12	Fine sandy loam	SM, ML	A-2-4, A-4	98-100	90-100	60-100	30-65	<25	NP-4
	12-25	Sandy clay loam, clay loam, loam.	CL, SC, CL-ML	A-4, A-6	98-100	90-100	80-100	40-80	23-40	7-19
	25-60	Loam, clay loam, sandy clay loam.	CL, SC, CL-ML	A-4, A-6, A-7, A-2	94-100	90-100	60-100	30-80	23-43	7-19
SeD2, SeE2, SeF-- Smithdale	0-6	Fine sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	6-36	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	36-80	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10
SL---------- Smithdale	0-17	Fine sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	17-32	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	32-80	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10
SR*:										
Smithdale	0-11	Fine sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	11-56	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	56-80	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10
Ruston	0-7	Sandy loam	SM, ML, CL-ML	A-4, A-2-4	100	85-100	65-85	30-55	<20	NP-7
	7-29	Sandy clay loam, loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
	29-45	Fine sandy loam, sandy loam, loamy sand.	SM, ML, CL-ML, SC-SM	A-4, A-2-4	100	85-100	65-85	30-75	<27	NP-7
	45-75	Sandy clay loam, loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
SS*:										
Smithdale	0-6	Fine sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	6-36	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	36-80	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
SS*:										
Ruston	0-6	Fine sandy loam	SM, ML, CL-ML	A-4, A-2-4	100	85-100	65-85	30-55	<20	NP-7
	6-12	Sandy clay loam, loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
	12-50	Fine sandy loam, sandy loam, loamy sand.	SM, ML, CL-ML, SC-SM	A-4, A-2-4	100	85-100	65-85	30-75	<27	NP-7
	50-80	Sandy clay loam, loam, clay loam.	SC, CL	A-6, A-7-6	100	85-100	80-95	36-75	25-45	11-20
StA	0-7	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-4	100	100	65-85	35-65	<25	NP-7
Stough	7-21	Loam, fine sandy loam, sandy loam.	ML, CL, CL-ML	A-4	100	100	75-95	50-75	<25	8-15
	21-65	Fine sandy loam, sandy clay loam, loam.	SC, SL	A-4, A-6	100	100	65-90	40-65	25-40	NP-7
SuE3*:										
Sumter	0-4	Silty clay loam	CL	A-7, A-6	90-100	85-100	80-98	75-90	35-50	16-25
	4-21	Silty clay, clay, silty clay loam.	CH, CL	A-7, A-6	85-100	78-98	75-95	75-95	35-55	16-32
	21-40	Weathered bedrock	---	---	---	---	---	---	---	---
Demopolis	0-6	Silty clay loam	CL, CL-ML	A-4, A-6, A-7	85-100	75-90	65-85	50-80	24-44	6-20
	6-14	Channery loam, channery clay loam, extremely channery silty clay loam.	GC, GM-GC, GP-GC	A-2, A-1	20-30	15-25	10-20	8-15	18-38	4-14
	14-40	Weathered bedrock	---	---	---	---	---	---	---	---
SwB2, SwC2, SwD2, SwF2	0-5	Fine sandy loam	CL-ML, CL, ML	A-4	100	100	90-100	55-90	<35	NP-10
Sweatman	5-30	Clay, silty clay, silty clay loam.	MH	A-7	95-100	95-100	95-100	90-95	60-80	25-40
	30-38	Clay, silty clay, loam.	MH, CL, CH	A-6, A-7	95-100	80-100	80-100	70-85	30-70	12-30
	38-60	Stratified weathered bedrock to fine sandy loam.	ML, MH	A-7	95-100	75-100	60-95	55-95	41-65	12-30
SX*:										
Sweatman	0-6	Fine sandy loam	CL-ML, CL, ML	A-4	100	100	90-100	55-90	<35	NP-10
	6-26	Clay, silty clay, silty clay loam.	MH	A-7	95-100	95-100	95-100	90-95	60-80	25-40
	26-35	Clay, silty clay, loam.	MH, CL, CH	A-6, A-7	95-100	80-100	80-100	70-85	30-70	12-30
	35-60	Stratified weathered bedrock to fine sandy loam.	ML, MH	A-7	95-100	75-100	60-95	55-95	41-65	12-30

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	4	10	40	200		
	In								Pct	
SX*:										
Smithdale	0-8	Fine sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	8-48	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	48-60	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10
SY*:										
Sweatman	0-4	Silt loam	CL-ML, CL, ML	A-4	100	100	90-100	55-90	<35	NP-10
	4-20	Clay, silty clay, silty clay loam.	MH	A-7	95-100	95-100	95-100	90-95	60-80	25-40
	20-38	Clay, silty clay, loam.	MH, CL, CH	A-6, A-7	95-100	80-100	80-100	70-85	30-70	12-30
	38-60	Stratified weathered bedrock to fine sandy loam.	ML, MH	A-7	95-100	75-100	60-95	55-95	41-65	12-30
Smithdale	0-6	Sandy loam	SM, SC-SM	A-4, A-2	100	85-100	60-95	28-49	<20	NP-5
	6-36	Clay loam, sandy clay loam, loam.	SC-SM, SC, CL, CL-ML	A-6, A-4	100	85-100	80-96	45-75	23-38	7-16
	36-60	Loam, sandy loam	SM, ML, CL, SC	A-4	100	85-100	65-95	36-70	<30	NP-10
WcA, WcB, WcC2, WcE2, WO*: Wilcox	0-4	Silty clay loam	CL, CH	A-7, A-6	100	100	95-100	80-98	30-51	15-30
	4-42	Clay, silty clay, silty clay loam.	CH, MH	A-7	100	100	95-100	80-98	50-78	22-46
	42-55	Clay	CH	A-7	100	100	90-100	75-98	60-80	39-55
	55-70	Weathered bedrock	---	---	---	---	---	---	---	---
WS*:										
Wilcox	0-4	Silty clay loam	CL, CH	A-7, A-6	100	100	95-100	80-98	30-51	15-30
	4-42	Clay, silty clay, silty clay loam.	CH, MH	A-7	100	100	95-100	80-98	50-78	22-46
	42-55	Clay	CH	A-7	100	100	90-100	75-98	60-80	39-55
	55-70	Weathered bedrock	---	---	---	---	---	---	---	---
Sweatman	0-6	Fine sandy loam	CL-ML, CL, ML	A-4	100	100	90-100	55-90	<35	NP-10
	6-26	Clay, silty clay, silty clay loam.	MH	A-7	95-100	95-100	95-100	90-95	60-80	25-40
	26-54	Stratified weathered bedrock to fine sandy loam.	ML, MH	A-7	95-100	75-100	60-95	55-95	41-65	12-30

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	g/cc	In/hr	In/in	pH				Pct
Bb	0-4	2-18	1.50-1.70	0.6-2.0	0.12-0.18	4.5-5.5	Low	0.20	5	1-3
Bibb	4-70	2-18	1.45-1.75	0.6-2.0	0.10-0.20	4.5-5.5	Low	0.37		
BeB2*:										
Binnsville	0-6	30-45	1.30-1.50	0.06-0.2	0.15-0.18	7.4-8.4	Moderate	0.37	2	1-4
	6-12	35-50	1.30-1.50	0.06-0.2	0.12-0.16	7.4-8.4	Moderate	0.37		
	12-30	---	---	0.01-0.06	---	---		----		
Demopolis	0-4	17-35	1.35-1.60	0.2-0.6	0.10-0.17	7.4-8.4	Moderate	0.37	2	1-2
	4-9	20-35	1.40-1.65	0.2-0.6	0.03-0.06	7.4-8.4	Low	0.32		
	9-40	---	---	0.00-0.01	---	---		----		
Cp	0-7	20-40	1.45-1.65	0.2-0.6	0.19-0.22	6.1-8.4	Moderate	0.28	5	2-4
Catalpa	7-64	35-50	1.45-1.60	0.06-0.2	0.18-0.20	6.1-8.4	High	0.28		
Da	0-7	5-15	1.40-1.50	0.6-2.0	0.10-0.14	4.5-6.5	Low	0.24	5	.5-2
Daleville	7-60	20-35	1.40-1.50	0.06-0.6	0.16-0.20	4.5-5.5	Moderate	0.37		
DJ*:										
Daleville	0-9	5-15	1.40-1.50	0.6-2.0	0.10-0.14	4.5-6.5	Low	0.24	5	.5-2
	9-70	20-35	1.40-1.50	0.06-0.6	0.16-0.20	4.5-5.5	Moderate	0.37		
Jena	0-7	10-20	1.30-1.70	0.6-2.0	0.12-0.20	4.5-6.0	Low	0.28	5	.5-2
	7-44	10-18	1.30-1.70	0.6-2.0	0.10-0.20	4.5-5.5	Low	0.28		
	44-60	5-20	1.35-1.65	2.0-6.0	0.08-0.14	4.5-5.5	Low	0.24		
DmD3*:										
Demopolis	0-4	17-35	1.35-1.60	0.2-0.6	0.10-0.17	7.4-8.4	Moderate	0.37	2	1-2
	4-14	20-35	1.40-1.65	0.2-0.6	0.03-0.06	7.4-8.4	Low	0.32		
	14-40	---	---	0.00-0.01	---	---		----		
Rock outcrop.										
FrA, FrB2	0-9	3-10	1.40-1.50	0.6-2.0	0.10-0.15	4.5-5.5	Low	0.28	5	.5-2
Freest	9-23	10-25	1.40-1.50	0.2-0.6	0.15-0.18	4.5-6.0	Moderate	0.32		
	23-66	27-50	1.40-1.55	0.06-0.2	0.15-0.18	4.5-7.3	High	0.28		
Ho	0-3	25-40	1.45-1.65	0.6-2.0	0.18-0.22	4.5-5.5	Moderate	0.28	5	.5-1
Houlka	3-81	35-55	1.40-1.60	<0.06	0.18-0.20	4.5-5.5	High	0.32		
Je	0-6	10-20	1.30-1.70	0.6-2.0	0.12-0.20	4.5-6.0	Low	0.28	5	.5-2
Jena	6-39	10-18	1.30-1.70	0.6-2.0	0.10-0.20	4.5-5.5	Low	0.28		
	39-65	5-20	1.35-1.65	2.0-6.0	0.08-0.14	4.5-5.5	Low	0.24		
Kn	0-12	5-27	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low	0.37	5	2-5
Kinston	12-50	18-35	1.30-1.50	0.6-2.0	0.14-0.18	4.5-5.5	Low	0.32		
	50-60	---	---	---	---	---		----		
KpA, KpB2	0-6	28-32	1.30-1.45	0.06-0.2	0.20-0.22	3.6-6.0	Moderate	0.32	5	.5-2
Kipling	6-33	36-60	1.37-1.41	0.06-0.2	0.20-0.22	3.6-8.4	High	0.32		
	33-63	40-60	1.57-1.60	<0.06	0.18-0.20	5.1-8.4	Very high	0.32		
Kr	0-7	14-27	1.30-1.50	0.6-2.0	0.15-0.22	4.5-5.5	Low	0.37	5	.5-2
Kirkville	7-65	10-18	1.35-1.55	0.6-2.0	0.10-0.15	4.5-5.5	Low	0.28		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	g/cc	In/hr	In/in	pH				Pct
Kv	0-4	14-27	1.30-1.50	0.6-2.0	0.15-0.22	4.5-5.5	Low	0.37	5	.5-2
Kirkville	4-65	10-18	1.35-1.55	0.6-2.0	0.10-0.15	4.5-5.5	Low	0.28		
Le	0-4	27-35	1.45-1.60	0.06-0.2	0.18-0.22	5.6-8.4	High	0.32	5	1-4
Leeper	4-72	35-50	1.40-1.60	<0.06	0.18-0.20	5.6-8.4	High	0.32		
Ma, Mc	0-8	8-20	1.50-1.60	0.6-2.0	0.16-0.20	4.5-5.5	Low	0.28	5	1-3
Mantachie	8-61	18-34	1.50-1.60	0.6-2.0	0.14-0.20	4.5-5.5	Low	0.28		
MeA	0-3	10-40	1.35-1.45	0.06-0.2	0.20-0.22	4.5-6.0	Moderate	0.37	5	1-3
Mayhew	3-40	35-60	1.40-1.55	<0.06	0.18-0.20	4.5-6.0	High	0.32		
	40-62	35-75	1.40-1.55	<0.06	0.18-0.20	4.5-6.0	High	0.32		
Mo	0-10	5-27	1.40-1.50	0.6-2.0	0.14-0.20	4.5-5.5	Low	0.37	5	.5-2
Mooreville	10-43	18-35	1.40-1.50	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
	43-60	10-40	1.40-1.60	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
Mr	0-4	5-27	1.40-1.50	0.6-2.0	0.14-0.20	4.5-5.5	Low	0.37	5	.5-2
Mooreville	4-28	18-35	1.40-1.50	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
	28-61	10-40	1.40-1.60	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
MV*:										
Mooreville	0-10	5-27	1.40-1.50	0.6-2.0	0.14-0.20	4.5-5.5	Low	0.37	5	.5-2
	10-43	18-35	1.40-1.50	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
	43-60	10-40	1.40-1.60	0.6-2.0	0.14-0.18	4.5-5.5	Moderate	0.28		
Kinston	0-12	5-27	1.30-1.50	0.6-2.0	0.14-0.20	4.5-6.0	Low	0.37	5	2-5
	12-50	18-35	1.30-1.50	0.6-2.0	0.14-0.18	4.5-5.5	Low	0.32		
	50-60	---	---	---	---	---	---	----		
Mantachie	0-8	8-20	1.50-1.60	0.6-2.0	0.16-0.20	4.5-5.5	Low	0.28	5	1-3
	8-61	18-34	1.50-1.60	0.6-2.0	0.14-0.20	4.5-5.5	Low	0.28		
OaA	0-5	27-50	1.30-1.50	<0.06	0.20-0.22	6.6-8.4	High	0.37	4	1-4
Okolona	5-65	40-55	1.30-1.50	<0.06	0.18-0.20	6.6-8.4	Very high	0.32		
ObC3	0-5	30-40	1.10-1.40	0.06-0.2	0.13-0.17	4.5-7.3	Moderate	0.32	5	2-7
Oktibbeha	5-28	60-80	1.00-1.30	0.00-0.06	0.12-0.16	3.5-5.5	Very high	0.32		
	28-57	60-80	1.00-1.30	0.00-0.06	0.12-0.16	3.5-6.5	Very high	0.32		
	57-70	50-70	1.10-1.40	0.00-0.06	0.05-0.10	6.6-8.4	Very high	0.32		
ObD3	0-2	30-40	1.10-1.40	0.06-0.2	0.13-0.17	4.5-7.3	Moderate	0.32	5	2-7
Oktibbeha	2-12	60-80	1.00-1.30	0.00-0.06	0.12-0.16	3.5-5.5	Very high	0.32		
	12-46	60-80	1.00-1.30	0.00-0.06	0.12-0.16	3.5-6.5	Very high	0.32		
	46-60	50-70	1.10-1.40	0.00-0.06	0.05-0.10	6.6-8.4	Very high	0.32		
OrB2	0-5	10-18	1.45-1.55	2.0-6.0	0.10-0.13	3.6-5.5	Low	0.28	4	1-3
Ora	5-22	18-33	1.45-1.60	0.6-2.0	0.12-0.18	3.6-5.5	Low	0.37		
	22-56	18-33	1.70-1.80	0.2-0.6	0.05-0.10	3.6-5.5	Low	0.32		
	56-65	10-35	1.65-1.75	0.6-2.0	0.10-0.15	3.6-5.5	Low	0.37		
OrC2, OrD2	0-7	10-18	1.45-1.55	2.0-6.0	0.10-0.13	3.6-5.5	Low	0.28	4	1-3
Ora	7-21	18-33	1.45-1.60	0.6-2.0	0.12-0.18	3.6-5.5	Low	0.37		
	21-50	18-33	1.70-1.80	0.2-0.6	0.05-0.10	3.6-5.5	Low	0.32		
	50-68	10-35	1.65-1.75	0.6-2.0	0.10-0.15	3.6-5.5	Low	0.37		
Pe*:										
Pits.										
Udorthents.										

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	g/cc	In/hr	In/in	pH				Pct
PnA, PnB	0-6	5-18	1.50-1.60	0.6-2.0	0.12-0.16	4.5-5.5	Low	0.37	4	1-3
Prentiss	6-22	5-18	0.80-1.50	0.6-2.0	0.12-0.16	4.5-5.5	Low	0.37		
	22-60	10-20	1.65-1.75	0.2-0.6	0.06-0.09	4.5-5.5	Low	0.24		
QaA	0-7	5-15	1.35-1.65	0.6-2.0	0.15-0.24	4.5-5.5	Low	0.28	5	1-3
Quitman	7-20	18-35	1.45-1.70	0.6-2.0	0.12-0.17	4.5-5.5	Low	0.28		
	20-67	18-35	1.45-1.70	0.2-0.6	0.11-0.17	4.5-5.5	Low	0.28		
QS*:										
Quitman	0-7	5-15	1.35-1.65	0.6-2.0	0.15-0.24	4.5-5.5	Low	0.28	5	1-3
	7-20	18-35	1.45-1.70	0.6-2.0	0.12-0.17	4.5-5.5	Low	0.28		
	20-67	18-35	1.45-1.70	0.2-0.6	0.11-0.17	4.5-5.5	Low	0.28		
Stough	0-7	5-15	1.40-1.55	0.6-2.0	0.12-0.18	4.5-5.5	Low	0.28	3	1-4
	7-21	8-18	1.45-1.50	0.2-0.6	0.07-0.11	4.5-5.5	Low	0.37		
	21-65	5-27	1.55-1.65	0.2-0.6	0.07-0.11	4.5-5.5	Low	0.37		
RA*:										
Rosebloom	0-7	18-25	1.40-1.55	0.6-2.0	0.2-0.22	4.5-5.5	Low	0.43	5	1-3
	7-60	20-35	1.40-1.55	0.6-2.0	0.2-0.22	4.5-5.5	Low	0.37		
Arkabutla	0-5	5-25	1.40-1.50	0.6-2.0	0.20-0.22	4.5-5.5	Low	0.43	5	1-3
	5-60	20-35	1.45-1.55	0.6-2.0	0.18-0.21	4.5-5.5	Low	0.32		
RnB, RnC2	0-6	2-20	1.30-1.70	0.6-2.0	0.09-0.16	4.5-6.5	Low	0.28	5	.5-3
Ruston	6-42	18-35	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		
	42-50	10-20	1.30-1.70	0.6-2.0	0.12-0.15	4.5-6.0	Low	0.28		
	50-80	15-38	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		
SaA, SaB, SaC2	0-12	3-16	1.50-1.60	0.6-2.0	0.13-0.16	3.6-5.5	Low	0.24	4	.5-3
Savannah	12-25	18-32	1.45-1.65	0.6-2.0	0.11-0.17	3.6-5.5	Low	0.28		
	25-60	18-32	1.60-1.80	0.2-0.6	0.05-0.10	3.6-5.5	Low	0.24		
SeD2, SeE2, SeF	0-6	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28	5	.5-2
Smithdale	6-36	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low	0.24		
	36-80	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28		
SL	0-17	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28	5	.5-2
Smithdale	17-32	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low	0.24		
	32-80	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28		
SR*:										
Smithdale	0-11	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28	5	.5-2
	11-56	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low	0.24		
	56-80	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28		
Ruston	0-7	2-20	1.30-1.70	0.6-2.0	0.09-0.16	4.5-6.5	Low	0.28	5	.5-3
	7-29	18-35	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		
	29-45	10-20	1.30-1.70	0.6-2.0	0.12-0.15	4.5-6.0	Low	0.28		
	45-75	15-38	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		
SS*:										
Smithdale	0-6	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28	5	.5-2
	6-36	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low	0.24		
	36-80	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low	0.28		
Ruston	0-6	2-20	1.30-1.70	0.6-2.0	0.09-0.16	4.5-6.5	Low	0.28	5	.5-3
	6-12	18-35	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		
	12-50	10-20	1.30-1.70	0.6-2.0	0.12-0.15	4.5-6.0	Low	0.28		
	50-80	15-38	1.40-1.70	0.6-2.0	0.12-0.17	4.5-6.0	Low	0.28		

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
								K	T	
	In	Pct	g/cc	In/hr	In/in	pH				Pct
StA----------	0-7	5-15	1.40-1.55	0.6-2.0	0.12-0.18	4.5-5.5	Low----------	0.28	3	1-4
Stough	7-21	8-18	1.45-1.50	0.2-0.6	0.07-0.11	4.5-5.5	Low----------	0.37		
	21-65	5-27	1.55-1.65	0.2-0.6	0.07-0.11	4.5-5.5	Low----------	0.37		
SuE3*:										
Sumter----------	0-4	32-50	1.30-1.60	0.06-2.0	0.12-0.17	6.6-8.4	High---------	0.37	2	2-5
	4-21	35-57	1.15-1.55	0.06-2.0	0.12-0.17	7.4-8.4	High---------	0.37		
	21-40	---	---	0.00-0.01	---	---	----------	----		
Demopolis-------	0-6	17-35	1.35-1.60	0.2-0.6	0.10-0.17	7.4-8.4	Moderate-----	0.37	2	1-2
	6-14	20-35	1.40-1.65	0.2-0.6	0.03-0.06	7.4-8.4	Low----------	0.32		
	14-40	---	---	0.00-0.01	---	---	----------	----		
SwB2, SwC2, SwD2, SwF2----------	0-5	5-20	1.40-1.60	0.6-2.0	0.20-0.22	4.5-5.5	Low----------	0.28	3	.5-2
Sweatman	5-30	35-55	1.40-1.50	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	30-38	35-55	1.40-1.55	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	38-60	---	---	0.2-0.6	0.10-0.18	4.5-5.5	Moderate-----	----		
SX*:										
Sweatman--------	0-6	5-20	1.40-1.60	0.6-2.0	0.20-0.22	4.5-5.5	Low----------	0.28	3	.5-2
	6-26	35-55	1.40-1.50	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	26-35	35-55	1.40-1.55	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	35-60	---	---	0.2-0.6	0.10-0.18	4.5-5.5	Moderate-----	----		
Smithdale-------	0-8	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low----------	0.28	5	.5-2
	8-48	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low----------	0.24		
	48-60	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low----------	0.28		
SY*:										
Sweatman--------	0-4	5-20	1.40-1.60	0.6-2.0	0.20-0.22	4.5-5.5	Low----------	0.28	3	.5-2
	4-20	35-55	1.40-1.50	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	20-38	35-55	1.40-1.55	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	38-60	---	---	0.2-0.6	0.10-0.18	4.5-5.5	Moderate-----	----		
Smithdale-------	0-6	2-15	1.40-1.50	2.0-6.0	0.14-0.16	4.5-5.5	Low----------	0.28	5	.5-2
	6-36	18-33	1.40-1.55	0.6-2.0	0.15-0.17	4.5-5.5	Low----------	0.24		
	36-60	12-27	1.40-1.55	2.0-6.0	0.14-0.16	4.5-5.5	Low----------	0.28		
WcA, WcB, WcC2, WcE2, WO*-------	0-4	15-40	1.40-1.45	0.06-0.2	0.15-0.21	4.5-5.5	High---------	0.37	4	.5-2
Wilcox	4-42	40-60	1.40-1.50	<0.06	0.18-0.20	3.6-5.5	High---------	0.32		
	42-55	40-70	1.40-1.55	<0.06	0.15-0.18	3.6-5.5	High---------	0.28		
	55-70	---	---	<0.06	---	---	----------	----		
WS*:										
Wilcox----------	0-4	15-40	1.40-1.45	0.06-0.2	0.15-0.21	4.5-5.5	High---------	0.37	4	.5-2
	4-42	40-60	1.40-1.50	<0.06	0.18-0.20	3.6-5.5	High---------	0.32		
	42-55	40-70	1.40-1.55	<0.06	0.15-0.18	3.6-5.5	High---------	0.28		
	55-70	---	---	<0.06	---	---	----------	----		
Sweatman--------	0-6	5-20	1.40-1.60	0.6-2.0	0.20-0.22	4.5-5.5	Low----------	0.28	3	.5-2
	6-26	35-55	1.40-1.50	0.2-0.6	0.16-0.20	4.5-5.5	Moderate-----	0.28		
	26-54	---	---	0.2-0.6	0.10-0.18	4.5-5.5	Moderate-----	----		

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 17.--SOIL AND WATER FEATURES

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Uncoated steel	Concrete
					Ft			In			
Bb Bibb	D	Occasional	Brief to long.	Dec-May	0.5-1.0	Apparent	Dec-Apr	>60	---	High	Moderate.
BeB2*: Binnsville	D	None	---	---	>6.0	---	---	10-20	Soft	Moderate	Low.
Demopolis	C	None	---	---	>6.0	---	---	10-20	Soft	Moderate	Low.
Cp Catalpa	C	Occasional	Brief to long.	Dec-Apr	1.5-2.0	Apparent	Feb-Mar	>60	---	High	Low.
Da Daleville	D	Frequent	Brief	Nov-May	0-1.0	Apparent	Nov-May	>60	---	High	High.
DJ*: Daleville	D	Frequent	Brief	Nov-May	0-1.0	Apparent	Nov-May	>60	---	High	High.
Jena	B	Frequent	Very brief to long.	Dec-Apr	>6.0	---	---	>60	---	Low	High.
DmD3*: Demopolis	C	None	---	---	>6.0	---	---	10-20	Soft	Moderate	Low.
Rock outcrop.											
FrA, FrB2 Freest	C	None	---	---	1.5-2.5	Apparent	Jan-Apr	>60	---	High	High.
Ho Houlka	D	Frequent	Brief to long.	Jan-Mar	1.0-2.0	Apparent	Jan-Mar	>60	---	High	High.
Je Jena	B	Occasional	Very brief to long.	Dec-Apr	>6.0	---	---	>60	---	Low	High.
Kn Kinston	B/D	Occasional	Brief	Nov-Jun	0-1.0	Apparent	Nov-Jun	>60	---	High	High.
KpA, KpB2 Kipling	D	None	---	---	1.5-3.0	Perched	Jan-Mar	>60	---	High	High.
Kr Kirkville	C	Occasional	Brief to long.	Jan-Apr	1.5-2.5	Apparent	Jan-Apr	>60	---	Moderate	High.
Kv Kirkville	C	Frequent	Brief to long.	Jan-Apr	1.5-2.5	Apparent	Jan-Apr	>60	---	Moderate	High.
Le Leeper	D	Occasional	Brief to long.	Jan-Mar	1.0-2.0	Apparent	Jan-Mar	>60	---	High	Low.
Ma Mantachie	C	Occasional	Brief	Jan-Mar	1.0-1.5	Apparent	Dec-Mar	>60	---	High	High.
Mc Mantachie	C	Frequent	Brief to long.	Jan-Mar	1.0-1.5	Apparent	Dec-Mar	>60	---	High	High.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Uncoated steel	Concrete
					Ft			In			
MeA---------- Mayhew	D	None--------	---	---	0-1.0	Apparent	Jan-Mar	>60	---	High-----	High.
Mo---------- Mooreville	C	Occasional	Brief-----	Jan-Mar	1.5-3.0	Apparent	Jan-Mar	>60	---	Moderate	High.
Mr---------- Mooreville	C	Frequent----	Brief-----	Jan-Mar	1.5-3.0	Apparent	Jan-Mar	>60	---	Moderate	High.
MV*:											
Mooreville-------	C	Frequent----	Brief-----	Jan-Mar	1.5-3.0	Apparent	Jan-Mar	>60	---	Moderate	High.
Kinston----------	B/D	Frequent----	Brief-----	Nov-Jun	0-1.0	Apparent	Nov-Jun	>60	---	High-----	High.
Mantachie--------	C	Frequent----	Brief-----	Jan-Mar	1.0-1.5	Apparent	Dec-Mar	>60	---	High-----	High.
OaA---------- Okolona	D	None--------	---	---	4.0-6.0	Apparent	Jan-Mar	>60	---	High-----	Moderate.
ObC3, ObD3-------- Oktibbeha	D	None--------	---	---	>6.0	---	---	>60	---	High-----	High.
OrB2, OrC2, OrD2-- Ora	C	None--------	---	---	2.0-3.5	Perched	Feb-Apr	>60	---	Moderate	High.
Pe*:											
Pits.											
Udorthents.											
PnA, PnB---------- Prentiss	C	None--------	---	---	2.0-2.5	Perched	Jan-Mar	>60	---	Moderate	High.
QaA---------- Quitman	C	None--------	---	---	1.5-2.0	Perched	Jan-Mar	>60	---	High-----	Moderate.
QS*:											
Quitman----------	C	None--------	---	---	1.5-2.0	Perched	Jan-Mar	>60	---	High-----	Moderate.
Stough----------	C	None--------	---	---	1.0-1.5	Perched	Jan-Apr	>60	---	Moderate	High.
RA*:											
Rosebloom--------	D	Frequent----	Brief to very long.	Jan-Mar	0-1.0	Apparent	Jan-Mar	>60	---	High-----	Moderate.
Arkabutla--------	C	Frequent----	Brief to very long.	Jan-Apr	1.0-1.5	Apparent	Jan-Apr	>60	---	High-----	High.
RnB, RnC2-------- Ruston	B	None--------	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
SaA, SaB, SaC2---- Savannah	C	None--------	---	---	1.5-3.0	Perched	Jan-Mar	>60	---	Moderate	High.
SeD2, SeE2, SeF, SL---------- Smithdale	B	None--------	---	---	>6.0	---	---	>60	---	Low------	Moderate.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Uncoated steel	Concrete
					Ft			In			
SR*, SS*:											
Smithdale	B	None	---	---	>6.0	---	---	>60	---	Low	Moderate.
Ruston	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
StA Stough	C	None	---	---	1.0-1.5	Perched	Jan-Apr	>60	---	Moderate	High.
SuE3*:											
Sumter	C	None	---	---	>6.0	---	---	20-40	Soft	Moderate	Low.
Demopolis	C	None	---	---	>6.0	---	---	10-20	Soft	Moderate	Low.
SwB2, SwC2, SwD2, SwF2 Sweatman	C	None	---	---	>6.0	---	---	>60	---	High	High.
SX*, SY*:											
Sweatman	C	None	---	---	>6.0	---	---	>60	---	High	High.
Smithdale	B	None	---	---	>6.0	---	---	>60	---	Low	Moderate.
WcA, WcB, WcC2, WcE2, WO* Wilcox	D	None	---	---	1.5-3.0	Perched	Jan-Apr	40-60	Soft	High	High.
WS*:											
Wilcox	D	None	---	---	1.5-3.0	Perched	Jan-Apr	40-60	Soft	High	High.
Sweatman	C	None	---	---	>6.0	---	---	>60	---	High	High.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 18.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Arkabutla	Fine-silty, mixed, acid, thermic Aeric Fluvaquents
Bibb	Coarse-loamy, siliceous, acid, thermic Typic Fluvaquents
Binnsville	Clayey, carbonatic, thermic, shallow Typic Rendolls
Catalpa	Fine, montmorillonitic, thermic Fluvaquentic Hapludolls
Daleville	Fine-loamy, siliceous, thermic Typic Paleaquults
Demopolis	Loamy, carbonatic, thermic, shallow Typic Udorthents
Freest	Fine-loamy, siliceous, thermic Aquic Paleudalfs
Houlka	Fine, montmorillonitic, thermic Aeric Epiaquerts
Jena	Coarse-loamy, siliceous, thermic Fluventic Dystrochrepts
Kinston	Fine-loamy, siliceous, acid, thermic Typic Fluvaquents
Kipling	Fine, montmorillonitic, thermic Vertic Paleudalfs
Kirkville	Coarse-loamy, siliceous, thermic Fluvaquentic Dystrochrepts
Leeper	Fine, montmorillonitic, nonacid, thermic Vertic Epiaquepts
Mantachie	Fine-loamy, siliceous, acid, thermic Aeric Fluvaquents
Mayhew	Fine, montmorillonitic, thermic Chromic Dystraquerts
Mooreville	Fine-loamy, siliceous, thermic Fluvaquentic Dystrochrepts
Okolona	Fine, montmorillonitic, thermic Oxyaquic Hapluderts
Oktibbeha	Very-fine, montmorillonitic, thermic Chromic Dystruderts
Ora	Fine-loamy, siliceous, thermic Typic Fragiudults
Prentiss	Coarse-loamy, siliceous, thermic Glossic Fragiudults
Quitman	Fine-loamy, siliceous, thermic Aquic Paleudults
Rosebloom	Fine-silty, mixed, acid, thermic Typic Fluvaquents
Ruston	Fine-loamy, siliceous, thermic Typic Paleudults
Savannah	Fine-loamy, siliceous, thermic Typic Fragiudults
Smithdale	Fine-loamy, siliceous, thermic Typic Hapludults
Stough	Coarse-loamy, siliceous, thermic Fragiaquic Paleudults
Sumter	Fine-silty, carbonatic, thermic Rendollic Eutrochrepts
Sweatman	Clayey, mixed, thermic Typic Hapludults
Wilcox	Fine, montmorillonitic, thermic Vertic Hapludalfs

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