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NRCS

Natural  
Resources  
Conservation  
Service

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

# Soil Survey of Paulding County, Georgia





# How To Use This Soil Survey

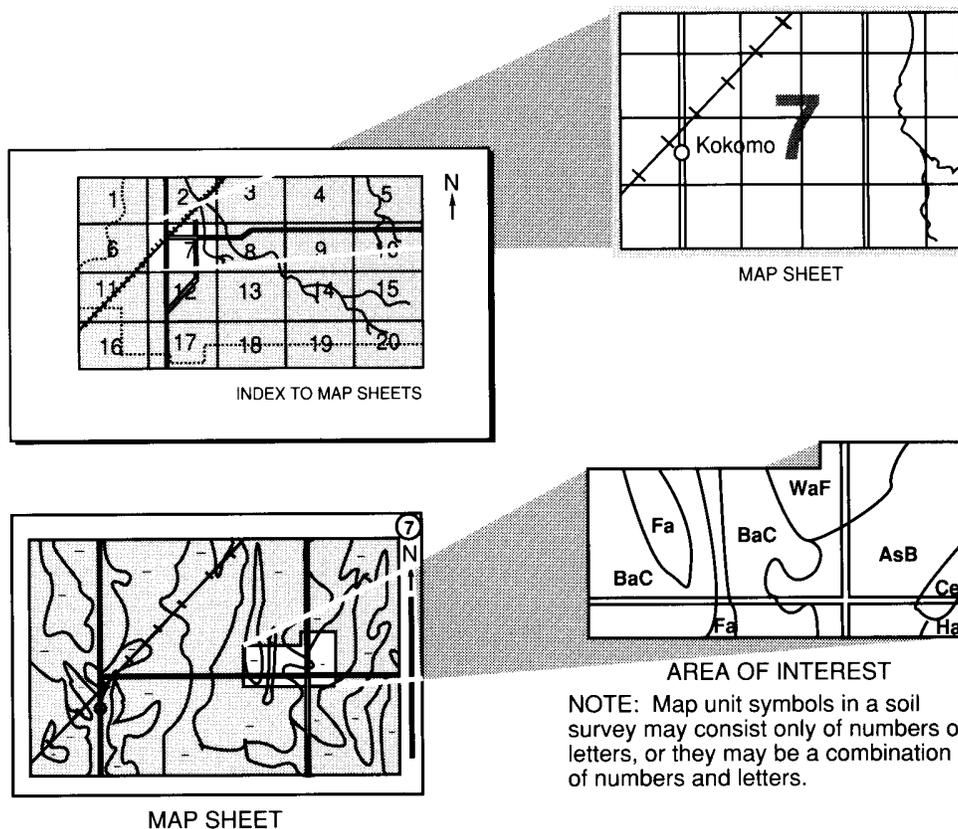
## Detailed Soil Maps

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

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

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

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



## National Cooperative Soil Survey

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

Major fieldwork for this soil survey was completed in 2009. Soil names and descriptions were approved in 2010. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2010. The most current official data are available on the Internet.

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

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## Cover Caption

Fescue growing in a pasture in an area of Pacolet sandy loam, 10 to 15 percent slopes, moderately eroded.

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

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# Foreword

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

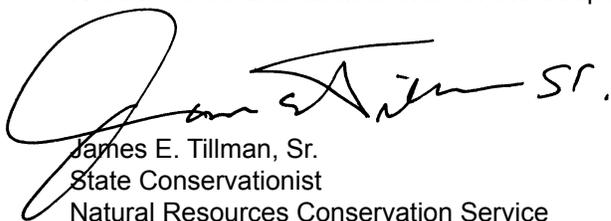
Soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers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

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

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

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

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



James E. Tillman, Sr.  
State Conservationist  
Natural Resources Conservation Service



# Soil Survey of Paulding County, Georgia

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By Curtis G. Marshall, Natural Resources Conservation Service

Fieldwork by Curtis G. Marshall, Stephon Thomas, David Moore,  
Roy Mathis, and Beth Anderson, Natural Resources Conservation Service

United States Department of Agriculture,  
Natural Resources Conservation Service,  
in cooperation with  
the University of Georgia,  
College of Agricultural and Environmental Sciences,  
Agricultural Experiment Stations

PAULDING COUNTY is in the northwestern part of Georgia, about 10 miles south of Cartersville and 30 miles northwest of Atlanta (fig. 1). The land area of the county is 313 square miles, or 200,100 acres. Dallas is the county seat. Elevation ranges from about 1,340 feet above sea level, near New Georgia and Draketown in the southwestern part of the county, to about 700 feet at the Bartow County line along Raccoon Creek.

Paulding County is within parts of two major land resource areas: the Southern Piedmont and a very small portion of the Southern Appalachian Ridges and Valleys. Most of the soils that are in the Southern Piedmont and on uplands are well drained, have a loamy surface layer, and have a fine-loamy or clayey subsoil in shades of red, dark red, or brown. Soils that have a thicker subsoil are commonly associated with the broader, gently sloping ridges and sloping hillsides. Soils that have a thinner subsoil are commonly associated with strongly sloping to steep hillsides and side slopes. The nearly level, well drained soils on flood plains are mainly loamy throughout, and the poorly drained soils on flood plains are loamy to clayey throughout.

The part of the county in the Southern Appalachian Ridges and Valleys is the extreme northwestern corner of the county and accounts for less than 1 percent of the county. The soils in this area are mainly old and on high terraces; some are on flood plains. The terrace soils are well drained, have a surface layer of sandy loam or loam, and have a loamy to clayey subsoil. The well drained soils on flood plains have a surface layer of loam and a fine-loamy subsoil. The moderately well drained or somewhat poorly drained soils on flood plains have a surface layer and subsoil that are silty or loamy.

## General Nature of the Survey Area

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

## Settlement and History

In the early 1800s, the southern portion of the survey area was inhabited by the Creek Indians and the northern portion was inhabited by the Cherokee Indians. In 1825, the

## Soil Survey of Paulding County, Georgia

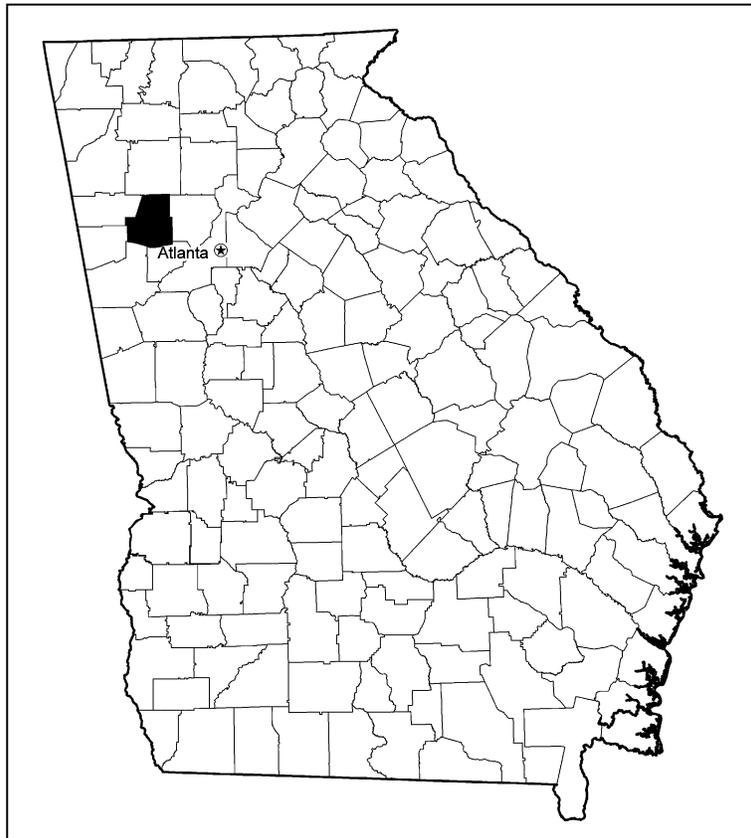


Figure 1.—Location of Paulding County in Georgia.

Creek Indians moved out. In 1838, the Cherokee Indians were moved west to Oklahoma in the Trail of Tears (Golden Ink, 2010). Most of the early settlers to the county were from the Carolinas and Virginia and were of English or Scotch-Irish decent (Foster, 1983). The search for gold brought many settlers to the county in the 1820s, leading to the removal of the Cherokee Indians (PCHBC, 1999). Paulding County was formed from a portion of Cherokee county by an act of the Georgia General Assembly on December 3, 1832, and became the 89th county in Georgia (PCBC, 2010). In 1840, the first official census of Paulding County indicated the population to be 2,556 (Pierce, 2010).

During the Civil War, the three notable conflicts in the county were at New Hope Church, Dallas, and Pickett's Mill. General Sherman held Dallas in hopes of drawing Joe Johnston's army away from its stronghold (Golden Ink, 2010).

During the reconstruction following the Civil War, the county did not grow until the opening of the Southern & Seaboard Railroads in 1882, which introduced the textile industry to the county (Dowell, 2010). Today, one abandoned railway has been turned into a paved trail, called the Silver Comet Trail, that runs from Smyrna, Georgia, through the county to Anniston, Alabama (PCBC, 2010).

In 2000, the population of the county was 81,678. The estimated 2009 census showed a population of 136,655 (USDC–USCB, 2010), making Paulding County the second fastest growing county in Metro Atlanta and the state of Georgia (Wikimedia Foundation, 2010).

### **Agriculture**

In 1840, the primary occupation in Paulding County was subsistence agriculture. The primary crops were corn, tobacco, and wheat with a little cotton (Georgia

## Soil Survey of Paulding County, Georgia

Humanities Council, 2011). In 2007, the number of farms in Paulding County was down to 181, the total land area for farms was 11,416 acres, and the average farm size was 63 acres (USDA–NASS, 2007).

The major commodities in the county are poultry and eggs followed by cattle and calves. The top crop item is forage in the form of hay, grass silage, and green chop.

### Climate

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

The climate tables were created using data from a climate station at Dallas, Georgia. Thunderstorm days, relative humidity, percent sunshine, and wind information were estimated from the first order station at Atlanta, Georgia.

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

In winter, the average temperature is 41.6 degrees F and the average daily minimum temperature is 30.4 degrees. The lowest temperature on record, which occurred on January 21, 1985, is -12 degrees. In summer, the average temperature is 76.2 degrees and the average daily maximum temperature is 87.7 degrees. The highest temperature, which occurred on July 18, 1980, is 104 degrees.

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

The average annual total precipitation is about 54.32 inches. Of this, about 29.04 inches, or 53 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 6.20 inches on February 3, 1982. Thunderstorms occur on about 49 days each year, and most occur in July.

The average seasonal snowfall is 3.6 inches. The greatest snow depth at any one time during the period of record was 9 inches, recorded on March 14, 1993. On average, 2 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 15.0 inches recorded on March 14, 1993.

The average relative humidity in mid-afternoon is about 56 percent. Humidity is higher at night, and the average at dawn is about 82 percent. The sun shines 64 percent of the time possible in summer and 51 percent in winter. The prevailing wind is from the northwest. Average wind speed is highest, 10.7 miles per hour, in March.

### How This Survey Was Made

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

Soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share

## Soil Survey of Paulding County, Georgia

common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA–NRCS, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas 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 and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

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

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

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

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

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

# Detailed Soil Map Units

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

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

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

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

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

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most

of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Rion sandy loam, 6 to 10 percent slopes, is a phase of the Rion series.

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

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Lloyd-Agricola-Musella complex, 2 to 6 percent slopes, moderately eroded, is an example.

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

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

## **AaE2—Agricola-Lloyd-Musella complex, 15 to 25 percent slopes, moderately eroded**

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

Agricola and similar soils: About 40 percent

Lloyd and similar soils: About 30 percent

Musella and similar soils: About 30 percent

### ***Characteristics of the Agricola Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

#### **Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 9 inches—dark red and dark reddish brown sandy loam

9 to 24 inches—dark red clay loam

24 to 34 inches—dark red cobbly sandy clay loam

*Bedrock:*

34 to 42 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* C

### ***Characteristics of the Lloyd Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark reddish brown sandy loam

*Subsoil:*

4 to 25 inches—dark red clay loam

25 to 40 inches—dark reddish brown sandy clay loam

40 to 48 inches—reddish brown sandy loam

*Substratum:*

48 to 59 inches—brown loamy fine sand

59 to 67 inches—reddish brown sandy loam

67 to 80 inches—yellowish red sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

### ***Characteristics of the Musella Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from hornblende gneiss

#### **Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 16 inches—dark red gravelly sandy clay loam

*Bedrock:*

16 to 20 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification: 7e*

*Hydrologic group: D*

**AcF2—Agricola-Lloyd-Musella complex, 25 to 45 percent slopes, stony, moderately eroded**

***Map Unit Composition***

Agricola and similar soils: About 50 percent

Lloyd and similar soils: About 30 percent

Musella and similar soils: About 20 percent

***Characteristics of the Agricola Soil***

**Setting**

*Landform: Hills*

*Position on the landform: Backslopes*

*Slope: Steep*

*Parent material: Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both*

**Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 9 inches—dark red and dark reddish brown sandy loam

9 to 24 inches—dark red clay loam

24 to 34 inches—dark red cobbly sandy clay loam

*Bedrock:*

34 to 42 inches—weathered bedrock

**Properties and qualities**

*Drainage class: Well drained*

*Seasonal high water table: None within a depth of 6 feet*

*Flooding: None*

*Ponding: None*

*Permeability: Moderate*

*Available water capacity: Low*

*Depth class: Moderately deep to bedrock*

**Interpretive groups**

*Land capability classification: 7e*

*Hydrologic group: C*

***Characteristics of the Lloyd Soil***

**Setting**

*Landform: Hills*

*Position on the landform: Backslopes*

*Slope: Steep*

*Parent material: Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both*

**Typical profile**

*Surface layer:*

0 to 4 inches—dark reddish brown sandy loam

*Subsoil:*

4 to 25 inches—dark red clay loam

## Soil Survey of Paulding County, Georgia

25 to 40 inches—dark reddish brown sandy clay loam

40 to 48 inches—reddish brown sandy loam

### *Substratum:*

48 to 59 inches—brown loamy fine sand

59 to 67 inches—reddish brown sandy loam

67 to 80 inches—yellowish red sandy loam

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

### **Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

## ***Characteristics of the Musella Soil***

### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep

*Parent material:* Residuum weathered from hornblende gneiss

### **Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 16 inches—dark red gravelly sandy clay loam

*Bedrock:*

16 to 20 inches—weathered bedrock

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

### **Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* D

## **AeB—Allen loam, 2 to 6 percent slopes**

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

Allen and similar soils: About 100 percent

## ***Characteristics of the Allen Soil***

### **Setting**

*Landform:* Ridges

*Position on the landform:* Backslopes, footslopes, and summits

## Soil Survey of Paulding County, Georgia

*Slope:* Gently sloping

*Parent material:* Residuum weathered from sandstone and shale, colluvium derived from sandstone and shale, or both

### **Typical profile**

*Surface layer:*

0 to 5 inches—brown loam

*Subsoil:*

5 to 14 inches—yellowish red clay loam

14 to 33 inches—red clay loam

33 to 51 inches—red clay loam

51 to 60 inches—red clay

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

### **Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* B

## **AeC—Allen loam, 6 to 10 percent slopes**

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

Allen and similar soils: About 100 percent

### ***Characteristics of the Allen Soil***

#### **Setting**

*Landform:* Ridges

*Position on the landform:* Summits, shoulders, and footslopes

*Slope:* Sloping

*Parent material:* Residuum weathered from sandstone and shale, colluvium derived from sandstone and shale, or both

#### **Typical profile**

*Surface layer:*

0 to 5 inches—brown loam

*Subsoil:*

5 to 14 inches—yellowish red clay loam

14 to 33 inches—red clay loam

33 to 51 inches—red clay loam

51 to 60 inches—red clay

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

**AeD—Allen loam, 10 to 15 percent slopes**

***Map Unit Composition***

Allen and similar soils: About 100 percent

***Characteristics of the Allen Soil***

**Setting**

*Landform:* Ridges

*Position on the landform:* Backslopes and footslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from sandstone and shale, colluvium derived from sandstone and shale, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—brown loam

*Subsoil:*

5 to 14 inches—yellowish red clay loam

14 to 33 inches—red clay loam

33 to 51 inches—red clay loam

51 to 60 inches—red clay

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

**AeE—Allen loam, 15 to 30 percent slopes**

***Map Unit Composition***

Allen and similar soils: About 100 percent

***Characteristics of the Allen Soil***

**Setting**

*Landform:* Ridges

*Position on the landform:* Backslopes

*Slope:* Moderately steep and steep

*Parent material:* Residuum weathered from sandstone and shale, colluvium derived from sandstone and shale, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—brown loam

*Subsoil:*

- 5 to 14 inches—yellowish red clay loam
- 14 to 33 inches—red clay loam
- 33 to 51 inches—red clay loam
- 51 to 60 inches—red clay

**Properties and qualities**

- Drainage class:* Well drained
- Seasonal high water table:* None within a depth of 6 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderate
- Available water capacity:* High
- Depth class:* Very deep

**Interpretive groups**

- Land capability classification:* 6e
- Hydrologic group:* B

**AnB—Altavista sandy loam, 2 to 6 percent slopes**

***Map Unit Composition***

Altavista and similar soils: About 100 percent

***Characteristics of the Altavista Soil***

**Setting**

- Landform:* Stream terraces
- Slope:* Gently sloping
- Parent material:* Loamy alluvium

**Typical profile**

*Surface layer:*

- 0 to 5 inches—dark grayish brown sandy loam

*Subsoil:*

- 5 to 12 inches—yellowish brown sandy loam
- 12 to 25 inches—yellowish brown sandy clay loam
- 25 to 47 inches—yellowish brown sandy clay loam that has yellowish brown and light gray mottles
- 47 to 57 inches—very pale brown and light yellowish brown sandy clay loam that has brownish yellow mottles

*Substratum:*

- 57 to 74 inches—light brownish gray and light yellowish brown loam that has brownish yellow mottles
- 74 to 80 inches—light gray sandy clay loam that has brownish yellow mottles

**Properties and qualities**

- Drainage class:* Moderately well drained
- Seasonal high water table:* Apparent, at a depth of about 1.5 to 2.5 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderate
- Available water capacity:* High
- Depth class:* Very deep

**Interpretive groups**

- Land capability classification:* 2e
- Hydrologic group:* C

## **ApB—Appling-Hard Labor complex, 2 to 6 percent slopes**

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

Appling and similar soils: About 70 percent

Hard Labor and similar soils: About 30 percent

### ***Characteristics of the Appling Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

#### **Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 10 inches—yellowish brown sandy clay loam

10 to 32 inches—yellowish brown sandy clay

32 to 41 inches—yellowish brown sandy clay

41 to 51 inches—yellowish brown, strong brown, and pale yellow sandy clay loam

*Substratum:*

51 to 60 inches—yellowish brown, light yellowish brown, and red sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* B

### ***Characteristics of the Hard Labor Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

#### **Typical profile**

*Surface layer:*

0 to 9 inches—dark brown sandy loam

*Subsoil:*

9 to 15 inches—yellowish brown sandy clay loam

15 to 26 inches—yellowish brown sandy clay

26 to 36 inches—yellowish brown clay that has red mottles

36 to 50 inches—yellowish brown, red, and light brownish gray sandy clay that has light brownish gray mottles

50 to 60 inches—red, yellowish brown, and very pale brown sandy clay that has very pale brown mottles

**Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of about 2.5 to 3.3 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* C

**ApC—Appling-Hard Labor complex, 6 to 10 percent slopes**

***Map Unit Composition***

Appling and similar soils: About 80 percent

Hard Labor and similar soils: About 20 percent

***Characteristics of the Appling Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 10 inches—yellowish brown sandy clay loam

10 to 32 inches—yellowish brown sandy clay

32 to 41 inches—yellowish brown sandy clay

41 to 51 inches—yellowish brown, strong brown, and pale yellow sandy clay loam

*Substratum:*

51 to 60 inches—yellowish brown, light yellowish brown, and red sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

***Characteristics of the Hard Labor Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

**Typical profile**

*Surface layer:*

0 to 9 inches—dark brown sandy loam

*Subsoil:*

9 to 15 inches—yellowish brown sandy clay loam

15 to 26 inches—yellowish brown sandy clay

26 to 36 inches—yellowish brown clay that has red mottles

36 to 50 inches—yellowish brown, red, and light brownish gray sandy clay that has light brownish gray mottles

50 to 60 inches—red, yellowish brown, and very pale brown sandy clay that has very pale brown mottles

**Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of about 2.5 to 3.3 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C

**ArB—Aragon sandy loam, 2 to 6 percent slopes**

***Map Unit Composition***

Aragon and similar soils: About 100 percent

***Characteristics of the Aragon Soil***

**Setting**

*Landform:* Ridges

*Position on the landform:* Summits and footslopes

*Slope:* Gently sloping

*Parent material:* Residuum weathered from sandstone and shale, residuum weathered from cherty limestone, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—brown sandy loam

*Subsoil:*

5 to 13 inches—yellowish brown loam

13 to 19 inches—yellowish brown clay loam

19 to 29 inches—red clay

29 to 46 inches—red silty clay

46 to 58 inches—yellowish red, yellowish brown, and gray silty clay loam

*Substratum:*

58 to 64 inches—red, brownish yellow, and pale brown silty clay loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* C

**ArC—Aragon sandy loam, 6 to 10 percent slopes**

***Map Unit Composition***

Aragon and similar soils: About 100 percent

***Characteristics of the Aragon Soil***

**Setting**

*Landform:* Ridges

*Position on the landform:* Summits, shoulders, and footslopes

*Slope:* Sloping

*Parent material:* Residuum weathered from sandstone and shale, residuum weathered from cherty limestone, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—brown sandy loam

*Subsoil:*

5 to 13 inches—yellowish brown loam

13 to 19 inches—yellowish brown clay loam

19 to 29 inches—red clay

29 to 46 inches—red silty clay

46 to 58 inches—yellowish red, yellowish brown, and gray silty clay loam

*Substratum:*

58 to 64 inches—red, brownish yellow, and pale brown silty clay loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C

**BrB—Braswell sandy loam, 2 to 6 percent slopes**

***Map Unit Composition***

Braswell and similar soils: About 100 percent

***Characteristics of the Braswell Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 11 inches—strong brown loam

11 to 21 inches—yellowish red clay loam

21 to 33 inches—yellowish red clay loam

33 to 48 inches—red loam

*Substratum:*

48 to 80 inches—light brown, light reddish brown, and pinkish gray sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* B

**BrC—Braswell sandy loam, 6 to 10 percent slopes**

***Map Unit Composition***

Braswell and similar soils: About 95 percent

***Minor Components***

- Fruithurst soils, which are moderately deep to bedrock and are in landscape positions similar to those of the Braswell soil

***Characteristics of the Braswell Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 11 inches—strong brown loam

11 to 21 inches—yellowish red clay loam

21 to 33 inches—yellowish red clay loam

33 to 48 inches—red loam

*Substratum:*

48 to 80 inches—light brown, light reddish brown, and pinkish gray sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate  
*Available water capacity:* High  
*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e  
*Hydrologic group:* B

**BrD—Braswell sandy loam, 10 to 15 percent slopes**

***Map Unit Composition***

Braswell and similar soils: About 100 percent

***Characteristics of the Braswell Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Backslopes  
*Slope:* Strongly sloping  
*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 11 inches—strong brown loam  
11 to 21 inches—yellowish red clay loam  
21 to 33 inches—yellowish red clay loam  
33 to 48 inches—red loam

*Substratum:*

48 to 80 inches—light brown, light reddish brown, and pinkish gray sandy loam

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderate  
*Available water capacity:* High  
*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e  
*Hydrologic group:* B

**CaA—Cartecay sandy loam, 0 to 3 percent slopes,  
occasionally flooded**

***Map Unit Composition***

Cartecay and similar soils: About 90 percent

***Minor Components***

- Toccoa soils, which are in the slightly higher landscape positions
- Wehadkee soils, which are poorly drained or very poorly drained, fine-loamy, and in the slightly lower landscape positions

### ***Characteristics of the Cartecay Soil***

#### **Setting**

*Landform:* Flood plains

*Slope:* Nearly level and gently sloping

*Parent material:* Coarse-loamy alluvium

#### **Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Underlying material:*

4 to 13 inches—dark yellowish brown sandy loam

13 to 26 inches—light olive brown sandy loam that has grayish brown and reddish brown mottles

26 to 37 inches—dark grayish brown and brown sandy loam that has yellowish red mottles

37 to 50 inches—dark gray sandy loam that has yellowish red mottles

50 to 58 inches—gray very gravelly loamy sand

58 to 62 inches—dark gray and dark grayish brown sand

62 to 66 inches—dark yellowish brown sand

#### **Properties and qualities**

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Apparent, at a depth of about 0.8 to 1.7 feet

*Flooding:* Occasional

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 3w

*Hydrologic group:* C/D

## **CfA—Cedarbluff loam, 0 to 2 percent slopes, occasionally flooded**

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

Cedarbluff and similar soils: About 95 percent

### ***Minor Components***

- Bloomingdale soils, which are poorly drained and in the slightly lower landscape positions

### ***Characteristics of the Cedarbluff Soil***

#### **Setting**

*Landform:* Flats, depressions, and stream terraces

*Position on the landform:* Toeslopes

*Slope:* Nearly level

*Parent material:* Alluvium derived from sandstone and shale

#### **Typical profile**

*Surface layer:*

0 to 5 inches—dark gray loam

*Subsoil:*

5 to 16 inches—light olive brown clay loam that has strong brown mottles

16 to 27 inches—grayish brown and yellowish brown clay loam

27 to 63 inches—light brownish gray and yellowish brown clay loam that has yellowish red and strong brown mottles

**Properties and qualities**

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Apparent, at a depth of about 0.5 to 1.7 feet

*Flooding:* Occasional

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3w

*Hydrologic group:* C/D

**ChA—Chewacla loam, 0 to 2 percent slopes, occasionally flooded**

***Map Unit Composition***

Chewacla and similar soils: About 90 percent

***Minor Components***

- Toccoa soils, which are well drained and are in the slightly higher landscape positions
- Wehadkee soils, which are poorly drained or very poorly drained and are in the slightly lower landscape positions

***Characteristics of the Chewacla Soil***

**Setting**

*Landform:* Flood plains

*Slope:* Nearly level

*Parent material:* Fine-loamy alluvium

**Typical profile**

*Surface layer:*

0 to 6 inches—dark brown loam

*Subsoil:*

6 to 14 inches—brown clay loam

14 to 25 inches—brown clay loam that has brown mottles

25 to 30 inches—very dark grayish brown clay loam that has yellowish red mottles

30 to 40 inches—dark gray sandy clay loam

*Substratum:*

40 to 60 inches—gray sandy clay loam

**Properties and qualities**

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Apparent, at a depth of about 0.5 to 2.0 feet

*Flooding:* Occasional

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3w

*Hydrologic group:* C/D

## **CrD—Crawfordville-Wateree complex, 6 to 15 percent slopes**

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

Crawfordville and similar soils: About 50 percent

Wateree and similar soils: About 35 percent

### ***Minor Components***

- Rowan soils, which are fine-loamy and are in landscape positions similar to those of the Crawfordville and Wateree soils
- Wilkes soils, which are shallow to soft bedrock and are in landscape positions similar to those of the Crawfordville and Wateree soils

### ***Characteristics of the Crawfordville Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits, shoulders, and backslopes

*Slope:* Sloping and strongly sloping

*Parent material:* Residuum weathered from migmatite

#### **Typical profile**

*Surface layer:*

0 to 2 inches—dark olive brown sandy loam

*Subsurface layer:*

2 to 7 inches—light olive brown sandy loam

*Subsoil:*

7 to 11 inches—yellowish brown and strong brown clay

11 to 17 inches—dark yellowish brown clay

17 to 21 inches—light yellowish brown and gray clay

*Substratum:*

21 to 25 inches—dark greenish gray sandy clay

*Bedrock:*

25 to 28 inches—greenish gray weathered bedrock

#### **Properties and qualities**

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Perched, at a depth of about 1.0 to 1.5 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Very slow

*Available water capacity:* Very low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* D

### ***Characteristics of the Wateree Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits, shoulders, and backslopes

*Slope:* Sloping and strongly sloping

*Parent material:* Residuum weathered from migmatite

#### **Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

## **DAM—Dam**

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

Dam: About 100 percent

This map unit consists of earthen dams.

## **FrD—Fruithurst-Braswell complex, 6 to 15 percent slopes**

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

Fruithurst and similar soils: About 55 percent

Braswell and similar soils: About 40 percent

### ***Minor Components***

- Tallapoosa soils, which are shallow to soft bedrock and are in landscape positions similar to those of the Fruithurst and Braswell soils

### ***Characteristics of the Fruithurst Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping and strongly sloping

*Parent material:* Residuum weathered from phyllite

#### **Typical profile**

*Surface layer:*

0 to 5 inches—brown channery fine sandy loam

*Subsoil:*

5 to 9 inches—reddish brown channery loam

9 to 14 inches—yellowish red channery loam

14 to 19 inches—red channery clay loam

19 to 31 inches—red channery silty clay loam

*Substratum:*

31 to 35 inches—red very channery loam

*Bedrock:*

35 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderate  
*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e  
*Hydrologic group:* C

***Characteristics of the Braswell Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits and shoulders  
*Slope:* Sloping and strongly sloping  
*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*  
0 to 6 inches—brown sandy loam  
*Subsoil:*  
6 to 11 inches—strong brown loam  
11 to 21 inches—yellowish red clay loam  
21 to 33 inches—yellowish red clay loam  
33 to 48 inches—red loam  
*Substratum:*  
48 to 80 inches—light brown, light reddish brown, and pinkish gray sandy loam

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderate  
*Available water capacity:* High  
*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e  
*Hydrologic group:* B

**FrE—Fruithurst-Braswell complex, 15 to 25 percent slopes**

***Map Unit Composition***

Fruithurst and similar soils: About 55 percent  
Braswell and similar soils: About 45 percent

***Characteristics of the Fruithurst Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Backslopes  
*Slope:* Moderately steep  
*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 5 inches—brown channery fine sandy loam

*Subsoil:*

5 to 9 inches—reddish brown channery loam

9 to 14 inches—yellowish red channery loam

14 to 19 inches—red channery clay loam

19 to 31 inches—red channery silty clay loam

*Substratum:*

31 to 35 inches—red very channery loam

*Bedrock:*

35 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* C

***Characteristics of the Braswell Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 11 inches—strong brown loam

11 to 21 inches—yellowish red clay loam

21 to 33 inches—yellowish red clay loam

33 to 48 inches—red loam

*Substratum:*

48 to 80 inches—light brown, light reddish brown, and pinkish gray sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

## **FtE—Fruithurst-Tallapoosa complex, 15 to 25 percent slopes**

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

Fruithurst and similar soils: About 60 percent

Tallapoosa and similar soils: About 40 percent

### ***Characteristics of the Fruithurst Soil***

#### **Setting**

*Landform:* Hillslopes

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from phyllite

#### **Typical profile**

*Surface layer:*

0 to 5 inches—brown channery fine sandy loam

*Subsoil:*

5 to 9 inches—reddish brown channery loam

9 to 14 inches—yellowish red channery loam

14 to 19 inches—red channery clay loam

19 to 31 inches—red channery silty clay loam

*Substratum:*

31 to 35 inches—red very channery loam

*Bedrock:*

35 to 60 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* C

### ***Characteristics of the Tallapoosa Soil***

#### **Setting**

*Landform:* Hillslopes

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from phyllite

#### **Typical profile**

*Surface layer:*

0 to 4 inches—brown channery fine sandy loam

*Subsoil:*

4 to 9 inches—dark yellowish brown channery loam

9 to 15 inches—strong brown channery loam

*Bedrock:*

15 to 60 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* D

**GrC—Grover-Mountain Park complex, 6 to 10 percent slopes**

***Map Unit Composition***

Grover and similar soils: About 75 percent

Mountain Park and similar soils: About 20 percent

***Minor Components***

- Musella soils, which are shallow to soft bedrock and are in landscape positions similar to those of the Grover and Mountain Park soils

***Characteristics of the Grover Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

**Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsurface layer:*

4 to 11 inches—yellowish brown gravelly sandy loam

*Subsoil:*

11 to 14 inches—yellowish red and strong brown sandy loam

14 to 25 inches—red and strong brown sandy clay loam

25 to 31 inches—red sandy loam

*Substratum:*

31 to 80 inches—yellowish red, red, and strong brown loamy sand

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

### **Characteristics of the Mountain Park Soil**

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsoil:*

4 to 10 inches—brown gravelly sandy loam

10 to 23 inches—yellowish red gravelly sandy clay loam

23 to 32 inches—yellowish red gravelly sandy loam

*Bedrock:*

32 to 46 inches—weathered bedrock

*Substratum:*

46 to 55 inches—strong brown sandy loam

*Bedrock:*

55 to 65 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C

## **GrD—Grover-Mountain Park complex, 10 to 15 percent slopes**

### **Map Unit Composition**

Grover and similar soils: About 75 percent

Mountain Park and similar soils: About 25 percent

### **Characteristics of the Grover Soil**

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsurface layer:*

4 to 11 inches—yellowish brown gravelly sandy loam

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### *Subsoil:*

- 11 to 14 inches—yellowish red and strong brown sandy loam
- 14 to 25 inches—red and strong brown sandy clay loam
- 25 to 31 inches—red sandy loam

### *Substratum:*

- 31 to 80 inches—yellowish red, red, and strong brown loamy sand

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

### **Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

## ***Characteristics of the Mountain Park Soil***

### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

### **Typical profile**

*Surface layer:*

- 0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsoil:*

- 4 to 10 inches—brown gravelly sandy loam
- 10 to 23 inches—yellowish red gravelly sandy clay loam
- 23 to 32 inches—yellowish red gravelly sandy loam

*Bedrock:*

- 32 to 46 inches—weathered bedrock

*Substratum:*

- 46 to 55 inches—strong brown sandy loam

*Bedrock:*

- 55 to 65 inches—weathered bedrock

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

### **Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* C

## **GrE—Grover-Mountain Park complex, 15 to 25 percent slopes**

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

Grover and similar soils: About 75 percent  
Mountain Park and similar soils: About 25 percent

### ***Characteristics of the Grover Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsurface layer:*

4 to 11 inches—yellowish brown gravelly sandy loam

*Subsoil:*

11 to 14 inches—yellowish red and strong brown sandy loam

14 to 25 inches—red and strong brown sandy clay loam

25 to 31 inches—red sandy loam

*Substratum:*

31 to 80 inches—yellowish red, red, and strong brown loamy sand

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

### ***Characteristics of the Mountain Park Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsoil:*

4 to 10 inches—brown gravelly sandy loam

10 to 23 inches—yellowish red gravelly sandy clay loam

23 to 32 inches—yellowish red gravelly sandy loam

*Bedrock:*

32 to 46 inches—weathered bedrock

*Substratum:*

46 to 55 inches—strong brown sandy loam

*Bedrock:*

55 to 65 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* C

## **GrF—Grover-Mountain Park complex, 25 to 45 percent slopes**

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

Grover and similar soils: About 60 percent

Mountain Park and similar soils: About 40 percent

### ***Characteristics of the Grover Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

**Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsurface layer:*

4 to 11 inches—yellowish brown gravelly sandy loam

*Subsoil:*

11 to 14 inches—yellowish red and strong brown sandy loam

14 to 25 inches—red and strong brown sandy clay loam

25 to 31 inches—red sandy loam

*Substratum:*

31 to 80 inches—yellowish red, red, and strong brown loamy sand

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification: 7e*

*Hydrologic group: B*

***Characteristics of the Mountain Park Soil***

**Setting**

*Landform: Hills*

*Position on the landform: Backslopes*

*Slope: Steep*

*Parent material: Residuum weathered from mica schist, residuum weathered from muscovite schist, or both*

**Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown gravelly sandy loam

*Subsoil:*

4 to 10 inches—brown gravelly sandy loam

10 to 23 inches—yellowish red gravelly sandy clay loam

23 to 32 inches—yellowish red gravelly sandy loam

*Bedrock:*

32 to 46 inches—weathered bedrock

*Substratum:*

46 to 55 inches—strong brown sandy loam

*Bedrock:*

55 to 65 inches—weathered bedrock

**Properties and qualities**

*Drainage class: Well drained*

*Seasonal high water table: None within a depth of 6 feet*

*Flooding: None*

*Ponding: None*

*Permeability: Moderate*

*Available water capacity: Low*

*Depth class: Moderately deep to bedrock*

**Interpretive groups**

*Land capability classification: 7e*

*Hydrologic group: C*

**HaB—Helena sandy loam, 2 to 6 percent slopes**

***Map Unit Composition***

Helena and similar soils: About 100 percent

***Characteristics of the Helena Soil***

**Setting**

*Landform: Hills*

*Position on the landform: Footslopes*

*Slope: Gently sloping*

*Parent material: Residuum weathered from granite and gneiss, residuum weathered from hornblende gneiss, or both*

**Typical profile**

*Surface layer:*

0 to 9 inches—brown sandy loam

*Subsurface layer:*

9 to 14 inches—light olive brown loam

*Subsoil:*

- 14 to 25 inches—strong brown clay loam
- 25 to 37 inches—strong brown clay that has grayish brown mottles
- 37 to 49 inches—strong brown sandy clay loam that has grayish brown mottles

*Substratum:*

- 49 to 60 inches—strong brown sandy clay loam that has gray mottles

**Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of about 1.5 to 2.5 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* D

## **LdB2—Lloyd-Agricola-Musella complex, 2 to 6 percent slopes, moderately eroded**

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

Lloyd and similar soils: About 55 percent

Agricola and similar soils: About 25 percent

Musella and similar soils: About 20 percent

### ***Characteristics of the Lloyd Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

**Typical profile**

*Surface layer:*

- 0 to 4 inches—dark reddish brown sandy loam

*Subsoil:*

- 4 to 25 inches—dark red clay loam
- 25 to 40 inches—dark reddish brown sandy clay loam
- 40 to 48 inches—reddish brown sandy loam

*Substratum:*

- 48 to 59 inches—brown loamy fine sand
- 59 to 67 inches—reddish brown sandy loam
- 67 to 80 inches—yellowish red sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

**Characteristics of the Agricola Soil**

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 9 inches—dark red and dark reddish brown sandy loam

9 to 24 inches—dark red clay loam

24 to 34 inches—dark red cobbly sandy clay loam

*Bedrock:*

34 to 42 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C

**Characteristics of the Musella Soil**

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 16 inches—dark red gravelly sandy clay loam

*Bedrock:*

16 to 20 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* D

**LdC2—Lloyd-Agricola-Musella complex, 6 to 10 percent slopes, moderately eroded**

***Map Unit Composition***

Lloyd and similar soils: About 50 percent

Agricola and similar soils: About 25 percent

Musella and similar soils: About 25 percent

***Characteristics of the Lloyd Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

**Typical profile**

*Surface layer:*

0 to 4 inches—dark reddish brown sandy loam

*Subsoil:*

4 to 25 inches—dark red clay loam

25 to 40 inches—dark reddish brown sandy clay loam

40 to 48 inches—reddish brown sandy loam

*Substratum:*

48 to 59 inches—brown loamy fine sand

59 to 67 inches—reddish brown sandy loam

67 to 80 inches—yellowish red sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

***Characteristics of the Agricola Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

**Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

- 5 to 9 inches—dark red and dark reddish brown sandy loam
- 9 to 24 inches—dark red clay loam
- 24 to 34 inches—dark red cobbly sandy clay loam

*Bedrock:*

- 34 to 42 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* C

***Characteristics of the Musella Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

- 0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

- 5 to 16 inches—dark red gravelly sandy clay loam

*Bedrock:*

- 16 to 20 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* D

**LdD2—Lloyd-Agricola-Musella complex, 10 to 15 percent slopes, moderately eroded**

***Map Unit Composition***

Lloyd and similar soils: About 55 percent

Agricola and similar soils: About 25 percent

Musella and similar soils: About 20 percent

### ***Characteristics of the Lloyd Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark reddish brown sandy loam

*Subsoil:*

4 to 25 inches—dark red clay loam

25 to 40 inches—dark reddish brown sandy clay loam

40 to 48 inches—reddish brown sandy loam

*Substratum:*

48 to 59 inches—brown loamy fine sand

59 to 67 inches—reddish brown sandy loam

67 to 80 inches—yellowish red sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

### ***Characteristics of the Agricola Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

#### **Typical profile**

*Surface layer:*

0 to 5 inches—dark reddish brown sandy loam

*Subsoil:*

5 to 9 inches—dark red and dark reddish brown sandy loam

9 to 24 inches—dark red clay loam

24 to 34 inches—dark red cobbly sandy clay loam

*Bedrock:*

34 to 42 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate  
*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e  
*Hydrologic group:* C

***Characteristics of the Musella Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Shoulders and backslopes  
*Slope:* Strongly sloping  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*  
0 to 5 inches—dark reddish brown sandy loam  
*Subsoil:*  
5 to 16 inches—dark red gravelly sandy clay loam  
*Bedrock:*  
16 to 20 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderate  
*Available water capacity:* Very low  
*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 6e  
*Hydrologic group:* D

**MaC2—Madison sandy loam, 6 to 10 percent slopes,  
moderately eroded**

***Map Unit Composition***

Madison and similar soils: About 95 percent

***Minor Components***

- Mountain Park soils, which are fine-loamy, moderately deep to bedrock, and in landscape positions similar to those of the Madison soil

***Characteristics of the Madison Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits and shoulders  
*Slope:* Sloping  
*Parent material:* Residuum weathered from igneous and metamorphic rock

**Typical profile**

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

*Subsoil:*

- 5 to 10 inches—yellowish red sandy clay
- 10 to 17 inches—red clay
- 17 to 24 inches—red sandy clay
- 24 to 38 inches—red sandy clay loam

*Substratum:*

- 38 to 50 inches—yellowish red, brown, and reddish yellow sandy clay loam
- 50 to 60 inches—brown, reddish yellow, and yellowish red sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

**PaB2—Pacolet sandy loam, 2 to 6 percent slopes,  
moderately eroded**

***Map Unit Composition***

Pacolet and similar soils: About 100 percent

***Characteristics of the Pacolet Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Gently sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

**Typical profile**

*Surface layer:*

- 0 to 4 inches—dark yellowish brown sandy loam

*Subsoil:*

- 4 to 25 inches—red clay loam
- 25 to 43 inches—light red and red sandy loam

*Substratum:*

- 43 to 80 inches—yellowish red and strong brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

## **PaC2—Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded**

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

Pacolet and similar soils: About 97 percent

### ***Minor Components***

- Agricola soils, which are moderately deep and are in landscape positions similar to those of the Pacolet soil

### ***Characteristics of the Pacolet Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown sandy loam

*Subsoil:*

4 to 25 inches—red clay loam

25 to 43 inches—light red and red sandy loam

*Substratum:*

43 to 80 inches—yellowish red and strong brown sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

## **PaD2—Pacolet sandy loam, 10 to 15 percent slopes, moderately eroded**

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

Pacolet and similar soils: About 97 percent

### ***Minor Components***

- Crawfordville soils, which are moderately deep and are in landscape positions similar to those of the Pacolet soil

### ***Characteristics of the Pacolet Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from igneous and metamorphic rock

**Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown sandy loam

*Subsoil:*

4 to 25 inches—red clay loam

25 to 43 inches—light red and red sandy loam

*Substratum:*

43 to 80 inches—yellowish red and strong brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

**PeA—Pettyjon loam, 0 to 2 percent slopes, occasionally flooded**

***Map Unit Composition***

Pettyjon and similar soils: About 90 percent

***Minor Components***

- Steadman soils, which are moderately well drained and are in the slightly lower landscape positions
- Toccoa soils, which are in landscape positions similar to those of the Pettyjon soil

***Characteristics of the Pettyjon Soil***

**Setting**

*Landform:* Flood plains

*Slope:* Nearly level

*Parent material:* Loamy alluvium derived from sedimentary rock

**Typical profile**

*Surface layer:*

0 to 12 inches—dark yellowish brown loam

*Subsoil:*

12 to 19 inches—dark brown clay loam

19 to 30 inches—dark yellowish brown and dark brown clay loam

30 to 46 inches—dark yellowish brown loam

46 to 66 inches—dark yellowish brown loam that has pale brown and dark brown mottles

*Substratum:*

66 to 80 inches—light yellowish brown loam that has light brownish gray and dark yellowish brown mottles

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* Occasional

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

**Interpretive groups**

*Land capability classification:* 2w  
*Hydrologic group:* C

**Pg—Pits, quarry**

***Map Unit Composition***

Pits: About 100 percent

This map unit consists of areas of large quarries or pits from which soil or soil parent materials have been removed. They are variable in size and depth. Some areas may be ponded.

**PoF—Poindexter-Wilkes complex, 25 to 60 percent slopes, stony**

***Map Unit Composition***

Poindexter and similar soils: About 55 percent

Wilkes and similar soils: About 30 percent

***Minor Components***

- Wynott soils, which are fine textured and are in landscape positions similar to those of the Poindexter and Wilkes soils
- Rowan soils, which are very deep to bedrock and are in landscape positions similar to those of the Poindexter and Wilkes soils

***Characteristics of the Poindexter Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep and very steep

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

0 to 8 inches—brown gravelly sandy loam

*Subsoil:*

8 to 14 inches—brown sandy loam

14 to 24 inches—yellowish red clay loam

24 to 30 inches—yellowish red sandy loam

*Bedrock:*

30 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e  
*Hydrologic group:* C

***Characteristics of the Wilkes Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Backslopes  
*Slope:* Steep and very steep  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*  
0 to 6 inches—brown channery sandy loam  
*Subsoil:*  
6 to 14 inches—strong brown and reddish brown sandy clay loam  
*Bedrock:*  
14 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderately slow  
*Available water capacity:* Very low  
*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7s  
*Hydrologic group:* D

**PrE—Poindexter-Wilkes-Rowan complex, 15 to 25 percent slopes, stony**

***Map Unit Composition***

Poindexter and similar soils: About 50 percent  
Wilkes and similar soils: About 25 percent  
Rowan and similar soils: About 20 percent

***Minor Components***

- Wynott soils, which have moderate shrink-swell potential and are in landscape positions similar to those of the Poindexter, Wilkes, and Rowan soils

***Characteristics of the Poindexter Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Backslopes  
*Slope:* Moderately steep  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*  
0 to 8 inches—brown gravelly sandy loam

*Subsoil:*

- 8 to 14 inches—brown sandy loam
- 14 to 24 inches—yellowish red clay loam
- 24 to 30 inches—yellowish red sandy loam

*Bedrock:*

- 30 to 48 inches—weathered bedrock

**Properties and qualities**

- Drainage class:* Well drained
- Seasonal high water table:* None within a depth of 6 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderate
- Available water capacity:* Low
- Depth class:* Moderately deep to bedrock

**Interpretive groups**

- Land capability classification:* 6e
- Hydrologic group:* C

***Characteristics of the Wilkes Soil***

**Setting**

- Landform:* Hills
- Position on the landform:* Backslopes
- Slope:* Moderately steep
- Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

- Surface layer:*
  - 0 to 6 inches—brown channery sandy loam
- Subsoil:*
  - 6 to 14 inches—strong brown and reddish brown sandy clay loam
- Bedrock:*
  - 14 to 48 inches—weathered bedrock

**Properties and qualities**

- Drainage class:* Well drained
- Seasonal high water table:* None within a depth of 6 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderately slow
- Available water capacity:* Very low
- Depth class:* Shallow to bedrock

**Interpretive groups**

- Land capability classification:* 7s
- Hydrologic group:* D

***Characteristics of the Rowan Soil***

**Setting**

- Landform:* Hills
- Position on the landform:* Backslopes
- Slope:* Moderately steep
- Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

- Surface layer:*
  - 0 to 6 inches—brown gravelly sandy loam

*Subsoil:*

- 6 to 14 inches—yellowish brown loam
- 14 to 25 inches—strong brown clay loam

*Substratum:*

- 25 to 36 inches—brown, yellowish red, and pale brown loam
- 36 to 66 inches—light brown, yellowish brown, and yellowish red fine sandy loam

*Bedrock:*

- 66 to 70 inches—bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* C

## **PwC—Poindexter-Wilkes-Wynott complex, 6 to 10 percent slopes, stony**

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

Poindexter and similar soils: About 40 percent

Wilkes and similar soils: About 25 percent

Wynott and similar soils: About 25 percent

### ***Minor Components***

- Rowan soils, which are very deep and are in landscape positions similar to those of the Poindexter, Wilkes, and Wynott soils

### ***Characteristics of the Poindexter Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

- 0 to 8 inches—brown gravelly sandy loam

*Subsoil:*

- 8 to 14 inches—brown sandy loam
- 14 to 24 inches—yellowish red clay loam
- 24 to 30 inches—yellowish red sandy loam

*Bedrock:*

- 30 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate  
*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 3e  
*Hydrologic group:* C

***Characteristics of the Wilkes Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits and shoulders  
*Slope:* Sloping  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*  
0 to 6 inches—brown channery sandy loam  
*Subsoil:*  
6 to 14 inches—strong brown and reddish brown sandy clay loam  
*Bedrock:*  
14 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderately slow  
*Available water capacity:* Very low  
*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 4s  
*Hydrologic group:* D

***Characteristics of the Wynott Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits and shoulders  
*Slope:* Sloping  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*  
0 to 6 inches—brown sandy loam  
*Subsoil:*  
6 to 12 inches—brown clay loam  
12 to 20 inches—yellowish brown clay  
20 to 26 inches—strong brown clay loam  
*Substratum:*  
26 to 32 inches—dark yellowish brown, light gray, and strong brown sandy clay loam  
*Bedrock:*  
32 to 36 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* D

**PwD—Poindexter-Wilkes-Wynott complex, 10 to 15 percent slopes, stony**

***Map Unit Composition***

Poindexter and similar soils: About 60 percent

Wilkes and similar soils: About 15 percent

Wynott and similar soils: About 15 percent

***Minor Components***

- Rowan soils, which are very deep and are in landscape positions similar to those of the Poindexter, Wilkes, and Wynott soils

***Characteristics of the Poindexter Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

0 to 8 inches—brown gravelly sandy loam

*Subsoil:*

8 to 14 inches—brown sandy loam

14 to 24 inches—yellowish red clay loam

24 to 30 inches—yellowish red sandy loam

*Bedrock:*

30 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* C

***Characteristics of the Wilkes Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes  
*Slope:* Strongly sloping  
*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

0 to 6 inches—brown channery sandy loam

*Subsoil:*

6 to 14 inches—strong brown and reddish brown sandy clay loam

*Bedrock:*

14 to 48 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately slow

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 6s

*Hydrologic group:* D

***Characteristics of the Wynott Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from hornblende gneiss

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsoil:*

6 to 12 inches—brown clay loam

12 to 20 inches—yellowish brown clay

20 to 26 inches—strong brown clay loam

*Substratum:*

26 to 32 inches—dark yellowish brown, light gray, and strong brown sandy clay loam

*Bedrock:*

32 to 36 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* D

## **RnC—Rion sandy loam, 6 to 10 percent slopes**

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

Rion and similar soils: About 100 percent

### ***Characteristics of the Rion Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Sloping

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Subsoil:*

4 to 12 inches—strong brown sandy loam

12 to 20 inches—strong brown sandy clay loam

20 to 28 inches—yellowish red sandy clay loam

28 to 38 inches—yellowish red and yellowish brown sandy loam

*Substratum:*

38 to 80 inches—light red and light reddish brown sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

## **RnD—Rion sandy loam, 10 to 15 percent slopes**

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

Rion and similar soils: About 95 percent

### ***Minor Components***

- Wateree soils, which are moderately deep to soft bedrock and are in landscape positions similar to those of the Rion soil

### ***Characteristics of the Rion Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Subsoil:*

- 4 to 12 inches—strong brown sandy loam
- 12 to 20 inches—strong brown sandy clay loam
- 20 to 28 inches—yellowish red sandy clay loam
- 28 to 38 inches—yellowish red and yellowish brown sandy loam

*Substratum:*

- 38 to 80 inches—light red and light reddish brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

## **RnE—Rion sandy loam, 15 to 25 percent slopes**

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

Rion and similar soils: About 95 percent

### ***Minor Components***

- Wake soils, which are shallow to bedrock, excessively drained, and in landscape positions similar to those of the Rion soil

### ***Characteristics of the Rion Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

- 0 to 4 inches—brown sandy loam

*Subsoil:*

- 4 to 12 inches—strong brown sandy loam
- 12 to 20 inches—strong brown sandy clay loam
- 20 to 28 inches—yellowish red sandy clay loam
- 28 to 38 inches—yellowish red and yellowish brown sandy loam

*Substratum:*

- 38 to 80 inches—light red and light reddish brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

**RwF—Rock outcrop-Wake-Wateree complex, 6 to 60 percent slopes**

***Map Unit Composition***

Rock outcrop and similar areas: About 40 percent

Wake and similar soils: About 30 percent

Wateree and similar soils: About 25 percent

***Minor Components***

- Rion soils, which are very deep, fine-loamy, and in landscape positions similar to those of the Wake and Wateree soils

***Characteristics of the Rock Outcrop***

The Rock outcrop consists of areas of hard, exposed granite gneiss.

***Characteristics of the Wake Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and backslopes

*Slope:* Sloping to very steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—dark brown loamy sand

*Subsoil:*

4 to 12 inches—dark yellowish brown loamy sand

*Bedrock:*

12 to 16 inches—bedrock

**Properties and qualities**

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Rapid

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7s

*Hydrologic group:* D

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and backslopes

*Slope:* Sloping to very steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

**SeC—Sedgefield-Wateree complex, 2 to 10 percent slopes**

***Map Unit Composition***

Sedgefield and similar soils: About 60 percent

Wateree and similar soils: About 30 percent

***Minor Components***

- Crawfordville soils, which are moderately deep and are in landscape positions similar to those of the Sedgefield and Wateree soils

***Characteristics of the Sedgefield Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Gently sloping and sloping

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from granite and gneiss, or both

**Typical profile**

*Surface layer:*

0 to 6 inches—brown sandy loam

*Subsurface layer:*

6 to 10 inches—yellowish brown sandy loam

*Subsoil:*

10 to 18 inches—yellowish brown clay

18 to 26 inches—light yellowish brown and light gray sandy clay that has light brownish gray mottles

26 to 33 inches—light gray clay loam that has brownish yellow and light brownish gray mottles

33 to 41 inches—brownish yellow, strong brown, and pale yellow sandy clay

*Substratum:*

41 to 58 inches—yellowish brown and light gray sandy loam

58 to 80 inches—light yellowish brown and light brownish gray sandy loam

**Properties and qualities**

*Drainage class:* Somewhat poorly drained

*Seasonal high water table:* Perched, at a depth of about 1.0 to 1.5 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C/D

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Gently sloping and sloping

*Parent material:* Residuum weathered from granite and gneiss, residuum weathered from hornblende gneiss, or both

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

**ShA—Shady loam, 0 to 2 percent slopes, occasionally flooded**

***Map Unit Composition***

Shady and similar soils: About 95 percent

***Minor Components***

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

### ***Characteristics of the Shady Soil***

#### **Setting**

*Landform:* Low stream terraces

*Slope:* Nearly level

*Parent material:* Loamy alluvium derived from sedimentary rock

#### **Typical profile**

*Surface layer:*

0 to 11 inches—dark yellowish brown loam

*Subsoil:*

11 to 26 inches—strong brown and dark yellowish brown clay loam

26 to 40 inches—strong brown clay loam

40 to 56 inches—strong brown sandy clay loam that has dark brown mottles

*Substratum:*

56 to 60 inches—yellowish brown and dark yellowish brown gravelly sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* Occasional

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 2w

*Hydrologic group:* B

## **ShB—Shady loam, 2 to 6 percent slopes**

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

Shady and similar soils: About 100 percent

### ***Characteristics of the Shady Soil***

#### **Setting**

*Landform:* Low stream terraces

*Position on the landform:* Toeslopes

*Slope:* Gently sloping

*Parent material:* Loamy alluvium derived from sedimentary rock

#### **Typical profile**

*Surface layer:*

0 to 11 inches—dark yellowish brown loam

*Subsoil:*

11 to 26 inches—strong brown and dark yellowish brown clay loam

26 to 40 inches—strong brown clay loam

40 to 56 inches—strong brown sandy clay loam that has dark brown mottles

*Substratum:*

56 to 60 inches—yellowish brown and dark yellowish brown gravelly sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate  
*Available water capacity:* High  
*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2e  
*Hydrologic group:* B

**SpF—Sipseys-Sunlight complex, 30 to 45 percent slopes**

***Map Unit Composition***

Sipseys and similar soils: About 50 percent  
Sunlight and similar soils: About 45 percent

***Minor Components***

- Allen soils, which are very deep, fine-loamy, and in landscape positions similar to those of the Sipseys and Sunlight soils

***Characteristics of the Sipseys Soil***

**Setting**

*Landform:* Ridges  
*Position on the landform:* Backslopes  
*Slope:* Steep  
*Parent material:* Residuum weathered from sandstone and shale

**Typical profile**

*Surface layer:*

0 to 5 inches—yellowish brown fine sandy loam

*Subsoil:*

5 to 13 inches—strong brown clay loam

13 to 24 inches—strong brown clay loam

24 to 27 inches—very pale brown, yellowish brown, and brownish yellow sandy clay loam

*Substratum:*

27 to 35 inches—very pale brown, yellowish brown, and brownish yellow fine sandy loam

*Bedrock:*

35 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderate  
*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e  
*Hydrologic group:* C

***Characteristics of the Sunlight Soil***

**Setting**

*Landform:* Ridges  
*Position on the landform:* Backslopes

*Slope:* Steep

*Parent material:* Residuum weathered from sandstone and shale

**Typical profile**

*Surface layer:*

0 to 5 inches—yellowish brown gravelly fine sandy loam

*Subsoil:*

5 to 10 inches—light yellowish brown gravelly fine sandy loam

10 to 15 inches—brownish yellow very channery fine sandy loam

*Bedrock:*

15 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* D

**StA—Steadman silt loam, 0 to 2 percent slopes,  
occasionally flooded**

***Map Unit Composition***

Steadman and similar soils: About 90 percent

***Minor Components***

- Bloomingdale soils, which are poorly drained and are in the slightly lower landscape positions
- Pettyjon soils, which are well drained and are in the slightly higher landscape positions

***Characteristics of the Steadman Soil***

**Setting**

*Landform:* Flood plains

*Slope:* Nearly level

*Parent material:* Alluvium derived from sedimentary rock

**Typical profile**

*Surface layer:*

0 to 4 inches—dark yellowish brown silt loam

*Subsoil:*

4 to 16 inches—brown loam

16 to 24 inches—brown silty clay loam

24 to 29 inches—light olive brown silty clay loam

29 to 34 inches—light yellowish brown silty clay loam that has brownish yellow, black, and light brownish gray mottles

34 to 45 inches—light yellowish brown silty clay loam that has light brownish gray and olive yellow mottles

45 to 60 inches—light yellowish brown and yellowish brown clay that has strong brown and light gray mottles

**Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Apparent, at a depth of about 1.5 to 3.0 feet

*Flooding:* Occasional

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* High

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2w

*Hydrologic group:* C

**TaF—Tallapoosa-Fruithurst complex, 25 to 60 percent slopes**

***Map Unit Composition***

Tallapoosa and similar soils: About 55 percent

Fruithurst and similar soils: About 45 percent

***Characteristics of the Tallapoosa Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep and very steep

*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 4 inches—brown channery fine sandy loam

*Subsoil:*

4 to 9 inches—dark yellowish brown channery loam

9 to 15 inches—strong brown channery loam

*Bedrock:*

15 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* D

***Characteristics of the Fruithurst Soil***

**Setting**

*Landform:* Hillslopes

*Position on the landform:* Backslopes

*Slope:* Steep and very steep

*Parent material:* Residuum weathered from phyllite

**Typical profile**

*Surface layer:*

0 to 5 inches—brown channery fine sandy loam

*Subsoil:*

5 to 9 inches—reddish brown channery loam

9 to 14 inches—yellowish red channery loam

14 to 19 inches—red channery clay loam

19 to 31 inches—red channery silty clay loam

*Substratum:*

31 to 35 inches—red very channery loam

*Bedrock:*

35 to 60 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* C

**ToA—Toccoa sandy loam, 0 to 3 percent slopes,  
occasionally flooded**

***Map Unit Composition***

Toccoa and similar soils: About 85 percent

***Minor Components***

- Cartecay soils, which are somewhat poorly drained and are in the slightly lower landscape positions

***Characteristics of the Toccoa Soil***

**Setting**

*Landform:* Flood plains (fig. 2)

*Slope:* Nearly level and gently sloping

*Parent material:* Coarse-loamy alluvium

**Typical profile**

*Surface layer:*

0 to 6 inches—dark brown sandy loam

*Underlying material:*

6 to 16 inches—reddish brown sandy loam

16 to 29 inches—reddish brown loamy sand

29 to 34 inches—reddish brown sandy loam

34 to 49 inches—dark yellowish brown and brown sandy loam that has dark yellowish brown mottles

49 to 67 inches—brown sandy loam that has yellowish red mottles

67 to 75 inches—yellowish red and brown loamy sand

75 to 85 inches—dark grayish brown sand that has red mottles



**Figure 2.— Typical landscape (flood plains) in an area of Toccoa sandy loam, 0 to 3 percent slopes, occasionally flooded.**



**Figure 3.— Flooding in an area of Toccoa sandy loam, 0 to 3 percent slopes, occasionally flooded.**

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* Apparent, at a depth of about 3.3 to 5.0 feet

*Flooding:* Occasional (fig. 3)

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 2w

*Hydrologic group:* A

**UaE—Udorthents, 10 to 25 percent slopes**

***Map Unit Composition***

Udorthents and similar areas: About 100 percent

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

**Ub—Urban land**

***Map Unit Composition***

Urban land: About 100 percent

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

**W—Water**

***Map Unit Composition***

Water: About 100 percent

This map unit consists of areas of open water, such as lakes, ponds, rivers, and streams.

**WaC—Wateree-Helena complex, 6 to 10 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 45 percent

Helena and similar soils: About 40 percent

***Minor Components***

- Poindexter and Rowan soils, which are fine-loamy and are in landscape positions similar to those of the Wateree and Helena soils

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

## Soil Survey of Paulding County, Georgia

*Slope:* Sloping

*Parent material:* Residuum weathered from granite and gneiss

### **Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

### **Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

## ***Characteristics of the Helena Soil***

### **Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping

*Parent material:* Residuum weathered from granite and gneiss

### **Typical profile**

*Surface layer:*

0 to 9 inches—brown sandy loam

*Subsurface layer:*

9 to 14 inches—light olive brown loam

*Subsoil:*

14 to 25 inches—strong brown clay loam

25 to 37 inches—strong brown clay that has grayish brown mottles

37 to 49 inches—strong brown sandy clay loam that has grayish brown mottles

*Substratum:*

49 to 60 inches—strong brown sandy clay loam that has gray mottles

### **Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of about 1.5 to 2.5 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

### **Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* D

## **WaD—Wateree-Helena complex, 10 to 15 percent slopes**

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

Wateree and similar soils: About 50 percent

Helena and similar soils: About 35 percent

### ***Minor Components***

- Rowan soils, which are well drained and are in landscape positions similar to those of the Wateree and Helena soils
- Crawfordville soils, which are in landscape positions similar to those of the Wateree and Helena soils
- Wake soils, which are shallow to bedrock and are in landscape positions similar to those of the Wateree and Helena soils

### ***Characteristics of the Wateree Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

### ***Characteristics of the Helena Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 9 inches—brown sandy loam

*Subsurface layer:*

9 to 14 inches—light olive brown loam

*Subsoil:*

- 14 to 25 inches—strong brown clay loam
- 25 to 37 inches—strong brown clay that has grayish brown mottles
- 37 to 49 inches—strong brown sandy clay loam that has grayish brown mottles

*Substratum:*

- 49 to 60 inches—strong brown sandy clay loam that has gray mottles

**Properties and qualities**

*Drainage class:* Moderately well drained

*Seasonal high water table:* Perched, at a depth of about 1.5 to 2.5 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Slow

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* D

**WeD—Wateree-Rion complex, 6 to 15 percent slopes,  
bouldery**

***Map Unit Composition***

Wateree and similar soils: About 50 percent

Rion and similar soils: About 50 percent

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping and strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

- 0 to 9 inches—dark yellowish brown sandy loam

*Subsurface layer:*

- 9 to 17 inches—light yellowish brown sandy loam

*Subsoil:*

- 17 to 28 inches—yellowish brown sandy loam

*Substratum:*

- 28 to 30 inches—strong brown sandy loam

*Bedrock:*

- 30 to 48 inches—weathered bedrock
- 48 to 52 inches—unweathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

***Characteristics of the Rion Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits and shoulders

*Slope:* Sloping and strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 5 inches—brown sandy loam

*Subsurface layer:*

5 to 19 inches—light yellowish brown sandy loam

*Subsoil:*

19 to 26 inches—light yellowish brown sandy loam

26 to 32 inches—yellowish brown sandy clay loam

32 to 42 inches—yellowish brown and strong brown sandy clay loam

42 to 48 inches—yellowish brown sandy clay loam

48 to 55 inches—light yellowish brown and strong brown sandy loam

*Substratum:*

55 to 65 inches—strong brown, yellowish brown, and pale brown sandy loam

65 to 80 inches—white and very pale brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

**WeE—Wateree-Rion complex, 15 to 25 percent slopes,  
bouldery**

***Map Unit Composition***

Wateree and similar soils: About 70 percent

Rion and similar soils: About 30 percent

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills (fig. 4)

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 9 inches—dark yellowish brown sandy loam



Figure 4.— Typical landscape in an area of Wateree-Rion complex, 15 to 25 percent slopes, bouldery.

*Subsurface layer:*

9 to 17 inches—light yellowish brown sandy loam

*Subsoil:*

17 to 28 inches—yellowish brown sandy loam

*Substratum:*

28 to 30 inches—strong brown sandy loam

*Bedrock:*

30 to 48 inches—weathered bedrock

48 to 52 inches—unweathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

***Characteristics of the Rion Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 5 inches—brown sandy loam

*Subsurface layer:*

5 to 19 inches—light yellowish brown sandy loam

*Subsoil:*

19 to 26 inches—light yellowish brown sandy loam

26 to 32 inches—yellowish brown sandy clay loam

32 to 42 inches—yellowish brown and strong brown sandy clay loam

42 to 48 inches—yellowish brown sandy clay loam

48 to 55 inches—light yellowish brown and strong brown sandy loam

*Substratum:*

55 to 65 inches—strong brown, yellowish brown, and pale brown sandy loam

65 to 80 inches—white and very pale brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

**WnC—Wateree-Rion complex, 6 to 10 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 60 percent

Rion and similar soils: About 40 percent

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

***Characteristics of the Rion Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Summits

*Slope:* Sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Subsoil:*

4 to 12 inches—strong brown sandy loam

12 to 20 inches—strong brown sandy clay loam

20 to 28 inches—yellowish red sandy clay loam

28 to 38 inches—yellowish red and yellowish brown sandy loam

*Stratum:*

38 to 80 inches—light red and light reddish brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* B

**WnD—Wateree-Rion complex, 10 to 15 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 50 percent

Rion and similar soils: About 45 percent

***Minor Components***

- Wake soils, which are shallow to bedrock and are in landscape positions similar to those of the Wateree and Rion soils

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

***Characteristics of the Rion Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Shoulders and backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Subsoil:*

4 to 12 inches—strong brown sandy loam

12 to 20 inches—strong brown sandy clay loam

20 to 28 inches—yellowish red sandy clay loam

28 to 38 inches—yellowish red and yellowish brown sandy loam

*Substratum:*

38 to 80 inches—light red and light reddish brown sandy loam

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 4e

*Hydrologic group:* B

## **WnE—Wateree-Rion complex, 15 to 25 percent slopes**

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

Wateree and similar soils: About 50 percent

Rion and similar soils: About 50 percent

### ***Characteristics of the Wateree Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

### ***Characteristics of the Rion Soil***

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 4 inches—brown sandy loam

*Subsoil:*

4 to 12 inches—strong brown sandy loam

12 to 20 inches—strong brown sandy clay loam

20 to 28 inches—yellowish red sandy clay loam

28 to 38 inches—yellowish red and yellowish brown sandy loam

*Substratum:*

38 to 80 inches—light red and light reddish brown sandy loam

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

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

**Interpretive groups**

*Land capability classification:* 6e  
*Hydrologic group:* B

**WrC—Wateree-Wake complex, 6 to 10 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 55 percent

Wake and similar soils: About 40 percent

***Minor Components***

- Crawfordville soils, which are fine textured and are in landscape positions similar to those of the Wateree and Wake soils

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits  
*Slope:* Sloping  
*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*  
0 to 7 inches—olive brown sandy loam  
*Subsoil:*  
7 to 27 inches—brownish yellow sandy loam  
*Substratum:*  
27 to 30 inches—brownish yellow and olive yellow loamy sand  
*Bedrock:*  
30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained  
*Seasonal high water table:* None within a depth of 6 feet  
*Flooding:* None  
*Ponding:* None  
*Permeability:* Moderately rapid  
*Available water capacity:* Low  
*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 4e  
*Hydrologic group:* B

***Characteristics of the Wake Soil***

**Setting**

*Landform:* Hills  
*Position on the landform:* Summits  
*Slope:* Sloping  
*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—dark brown loamy sand

*Subsoil:*

4 to 12 inches—dark yellowish brown loamy sand

*Bedrock:*

12 to 16 inches—bedrock

**Properties and qualities**

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Rapid

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 4s

*Hydrologic group:* D

**WrD—Wateree-Wake complex, 10 to 15 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 55 percent

Wake and similar soils: About 30 percent

***Minor Components***

- Rion soils, which are well drained, very deep, fine-loamy, and in landscape positions similar to those of the Wateree and Wake soils

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 6e

*Hydrologic group:* B

***Characteristics of the Wake Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Strongly sloping

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—dark brown loamy sand

*Subsoil:*

4 to 12 inches—dark yellowish brown loamy sand

*Bedrock:*

12 to 16 inches—bedrock

**Properties and qualities**

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Rapid

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 6s

*Hydrologic group:* D

**WrE—Wateree-Wake complex, 15 to 25 percent slopes**

***Map Unit Composition***

Wateree and similar soils: About 65 percent

Wake and similar soils: About 20 percent

***Minor Components***

- Rion soils, which are very deep, fine-loamy, and in landscape positions similar to those of the Wateree and Wake soils

***Characteristics of the Wateree Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 7 inches—olive brown sandy loam

*Subsoil:*

7 to 27 inches—brownish yellow sandy loam

*Substratum:*

27 to 30 inches—brownish yellow and olive yellow loamy sand

*Bedrock:*

30 to 45 inches—weathered bedrock

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

**Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

***Characteristics of the Wake Soil***

**Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Moderately steep

*Parent material:* Residuum weathered from granite and gneiss

**Typical profile**

*Surface layer:*

0 to 4 inches—dark brown loamy sand

*Subsoil:*

4 to 12 inches—dark yellowish brown loamy sand

*Bedrock:*

12 to 16 inches—bedrock

**Properties and qualities**

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Rapid

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 6s

*Hydrologic group:* D

**WrF—Wateree-Wake complex, 25 to 45 percent slopes,  
bouldery**

***Map Unit Composition***

Wateree and similar soils: About 55 percent

Wake and similar soils: About 30 percent

***Minor Components***

- Rion soils, which are very deep, fine-loamy, and in landscape positions similar to those of the Wateree and Wake soils

### **Characteristics of the Wateree Soil**

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 9 inches—dark yellowish brown sandy loam

*Subsurface layer:*

9 to 17 inches—light yellowish brown sandy loam

*Subsoil:*

17 to 28 inches—yellowish brown sandy loam

*Substratum:*

28 to 30 inches—strong brown sandy loam

*Bedrock:*

30 to 48 inches—weathered bedrock

48 to 52 inches—unweathered bedrock

#### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderately rapid

*Available water capacity:* Low

*Depth class:* Moderately deep to bedrock

#### **Interpretive groups**

*Land capability classification:* 7e

*Hydrologic group:* B

### **Characteristics of the Wake Soil**

#### **Setting**

*Landform:* Hills

*Position on the landform:* Backslopes

*Slope:* Steep

*Parent material:* Residuum weathered from granite and gneiss

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark brown loamy sand

*Subsoil:*

4 to 12 inches—dark yellowish brown loamy sand

*Bedrock:*

12 to 16 inches—bedrock

#### **Properties and qualities**

*Drainage class:* Excessively drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Rapid

*Available water capacity:* Very low

*Depth class:* Shallow to bedrock

**Interpretive groups**

*Land capability classification:* 7s

*Hydrologic group:* D

**WsC—Waynesboro clay loam, 6 to 10 percent slopes,  
moderately eroded**

***Map Unit Composition***

Waynesboro and similar soils: About 100 percent

***Characteristics of the Waynesboro Soil***

**Setting**

*Landform:* High stream terraces

*Slope:* Sloping

*Parent material:* Old alluvium derived from limestone, sandstone, and shale

**Typical profile**

*Surface layer:*

0 to 6 inches—reddish brown clay loam

*Subsoil:*

6 to 13 inches—yellowish red clay loam

13 to 26 inches—red clay

26 to 44 inches—red clay

44 to 55 inches—red clay

55 to 72 inches—red clay

**Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

**Interpretive groups**

*Land capability classification:* 3e

*Hydrologic group:* C

**WsD—Waynesboro clay loam, 10 to 15 percent slopes,  
moderately eroded**

***Map Unit Composition***

Waynesboro and similar soils: About 100 percent

***Characteristics of the Waynesboro Soil***

**Setting**

*Landform:* High stream terraces

*Slope:* Strongly sloping

*Parent material:* Old alluvium derived from limestone, sandstone, and shale

**Typical profile**

*Surface layer:*

0 to 6 inches—reddish brown clay loam

*Subsoil:*

- 6 to 13 inches—yellowish red clay loam
- 13 to 26 inches—red clay
- 26 to 44 inches—red clay
- 44 to 55 inches—red clay
- 55 to 72 inches—red clay

**Properties and qualities**

- Drainage class:* Well drained
- Seasonal high water table:* None within a depth of 6 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderate
- Available water capacity:* Moderate
- Depth class:* Very deep

**Interpretive groups**

- Land capability classification:* 4e
- Hydrologic group:* C

**WsE—Waynesboro clay loam, 15 to 30 percent slopes,  
moderately eroded**

***Map Unit Composition***

Waynesboro and similar soils: About 100 percent

***Characteristics of the Waynesboro Soil***

**Setting**

- Landform:* High stream terraces
- Slope:* Moderately steep and steep
- Parent material:* Old alluvium derived from limestone, sandstone, and shale

**Typical profile**

*Surface layer:*

- 0 to 6 inches—reddish brown clay loam

*Subsoil:*

- 6 to 13 inches—yellowish red clay loam
- 13 to 26 inches—red clay
- 26 to 44 inches—red clay
- 44 to 55 inches—red clay
- 55 to 72 inches—red clay

**Properties and qualities**

- Drainage class:* Well drained
- Seasonal high water table:* None within a depth of 6 feet
- Flooding:* None
- Ponding:* None
- Permeability:* Moderate
- Available water capacity:* Moderate
- Depth class:* Very deep

**Interpretive groups**

- Land capability classification:* 6e
- Hydrologic group:* C

## **WtA—Wehadkee silt loam, 0 to 2 percent slopes, occasionally flooded**

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

Wehadkee and similar soils: About 92 percent

### ***Minor Components***

- Cartecay soils, which are somewhat poorly drained and are in landscape positions near the channel
- Chewacla soils, which are somewhat poorly drained and are in landscape positions that are slightly higher than those of the Wehadkee soil

### ***Characteristics of the Wehadkee Soil***

#### **Setting**

*Landform:* Flood plains

*Slope:* Nearly level

*Parent material:* Loamy alluvium

#### **Typical profile**

*Surface layer:*

0 to 4 inches—dark grayish brown silt loam

*Subsoil:*

4 to 20 inches—gray loam

*Substratum:*

20 to 40 inches—gray stratified sandy loam to loam

40 to 80 inches—dark gray sandy loam

#### **Properties and qualities**

*Drainage class:* Poorly drained

*Seasonal high water table:* Apparent, at the surface

*Flooding:* Occasional

*Ponding:* Occasional

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

#### **Interpretive groups**

*Land capability classification:* 6w

*Hydrologic group:* C/D

## **WyB—Wickham sandy loam, 2 to 6 percent slopes**

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

Wickham and similar soils: About 100 percent

### ***Characteristics of the Wickham Soil***

#### **Setting**

*Landform:* Stream terraces

*Slope:* Gently sloping

*Parent material:* Old, loamy alluvium

#### **Typical profile**

*Surface layer:*

0 to 7 inches—brown sandy loam

*Subsoil:*

7 to 12 inches—dark brown sandy loam

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12 to 54 inches—yellowish red sandy clay loam

54 to 62 inches—strong brown sandy clay loam

62 to 80 inches—strong brown sandy loam

### **Properties and qualities**

*Drainage class:* Well drained

*Seasonal high water table:* None within a depth of 6 feet

*Flooding:* None

*Ponding:* None

*Permeability:* Moderate

*Available water capacity:* Moderate

*Depth class:* Very deep

### **Interpretive groups**

*Land capability classification:* 2e

*Hydrologic group:* B



# Use and Management of the Soils

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

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

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

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

Contractors can use this survey to locate sources of sand, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

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

## Interpretive Ratings

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

## Rating Class Terms

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

## Numerical Ratings

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

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

## **Crops and Pasture**

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

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

## **Yields per Acre**

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

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

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

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

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

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

## **Land Capability Classification**

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that

would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

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

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

Class 1 soils have slight limitations that restrict their use.

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

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

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

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

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

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

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

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

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

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

## Pasture and Hayland

Dennis Chessman, grazing lands specialist, Natural Resources Conservation Service, helped prepare this section.

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

## Soil Survey of Paulding County, Georgia

Warm-season grasses, cool-season grasses, and legumes can all be productive in the county. Bermudagrass (a warm-season grass) and tall fescue (a cool-season grass) are grown, commonly together, in most of the pastures and hay fields in the county. Both species are non-native perennials but were growing in the southeastern U.S. at least as early as the mid-18th century. Common bermudagrass, as well as several improved varieties, can be seeded. Coastal bermudagrass and other hybrids, however, do not produce enough viable seed for reproduction and therefore must be established vegetatively. Most of the seasonal growth for all varieties of bermudagrass occurs between April and October. Bermudagrass can provide excellent grazing and hay. Tall fescue is typically used for pasture.

The University of Georgia Extension Service can be consulted to determine which varieties are currently recommended for the county. Bermudagrass varieties have varying tolerance to cold. Tall fescue is slightly less drought-tolerant than bermudagrass, especially on deep, sandy soils. Tall fescue, however, is adapted to a wide range of soil moisture conditions, including upland and lowland sites, whereas most varieties of bermudagrass are not adapted to poorly drained conditions. Tall fescue is a cool-season perennial grass and has two distinct periods of annual growth. Most of the growth occurs from late winter to spring. Another, slightly less productive, period occurs in the fall. Kentucky-31 is the most common variety of tall fescue. An endophyte within K-31 confers improved stress-tolerance and a degree of pest resistance to the plant. However, cattle and mares grazing K-31 can experience toxicity symptoms related to the presence of the endophyte. Novel varieties of endophyte tall fescue are available. These varieties provide much of the benefit of the endophyte without causing livestock toxicity.

Native warm-season grasses, such as switchgrass, eastern gamagrass, Indiangrass, and little bluestem, are adapted to the conditions in the county and are able to provide high-quality spring grazing. These species, however, are typically established to provide wildlife habitat and are not widely used exclusively for forage production. Unlike the non-native forage grasses, which are relatively tolerant of continuous grazing, the native grasses must be rotationally stocked and minimum grazing heights must be rigorously maintained to prevent stand loss. In some pastures in the county, other, less productive, perennial forage species include warm-season grasses, such as dallisgrass, carpetgrass, and bahiagrass, and cool-season grasses, such as orchardgrass. Also, white clover and red clover, which are technically perennials, are grown in some pastures. Although these clovers are technically perennial, they may act more like annuals or biennials in north Georgia.

Competition from weeds can be a problem in fields where thinning of the stand or death of the forage has allowed undesirable plants to become established. Management- and environment-related factors that can contribute to poor forage growth and favorable conditions for weeds include decreased soil fertility, low soil pH, improper grazing or harvest management, extended drought, and other extreme weather conditions. Selective use of herbicides may be necessary if undesirable plants become established and reach threshold population levels.

Soils in the county are highly weathered and naturally acidic. Applying fertilizer and lime on the basis of periodic soil testing with consideration for yield goals helps to ensure vigorous forage growth. Although tall fescue and bermudagrass are tolerant of relatively low soil pH, the efficiency of fertilizer can be improved by applying limestone to soils with pH below 6.0. If other environmental conditions for growth are favorable, yields of tall fescue and bermudagrass can be significantly increased by applying nitrogen fertilizer. Hybrid bermudagrass varieties in particular are highly responsive to applications of fertilizer. The yield potential is at least 8 to 10 tons per acre if nitrogen is supplied throughout the growing season and soil moisture is not limiting. Low levels of potassium in the soil can result in increased susceptibility by bermudagrass to environmental stresses, such as cold, drought,

and over-grazing. Such stresses can lead to stand decline or loss, especially if improved varieties are managed for maximum yields of hay.

Proper forage harvest management includes maintaining a minimum after-harvest height and allowing adequate time for regrowth before the plants are mowed or grazed again. Excessive stocking rates can result in plants being grazed too close to the ground and being regrazed before they have enough time to recover from previous harvesting. Common bermudagrass should not be harvested to a height of less than 2 inches, and the improved varieties should not be harvested to less than 3 or 4 inches. Tall fescue should not be grazed to less than 3 inches. Minimum grazing heights should be increased when plants are severely stressed, such as during prolonged drought. Although these species are relatively tolerant of the frequent grazing that is typically associated with continuous stocking, they perform better if stock density is adjusted or pasture rest periods are provided as the plant growth rate changes throughout the season. Native grasses are much less tolerant of close and frequent harvesting. Generally, they should not be grazed to a height of less than 6 to 8 inches, depending on species. Recovery time after grazing is longer for the native grasses than for the non-native species. Rotational stocking with several paddocks is essential for the maintenance of vigorous, long-term, native warm-season grassland. The time necessary for regrowth of any species is influenced by the moisture content, fertility, and temperature of the soil and by harvest height.

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

## **Prime Farmland and Farmland of Statewide Importance**

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

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

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

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated

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

About 8,585 acres in the survey area, or nearly 4.2 percent of the total land acreage, meets the soil requirements for prime farmland. Scattered areas of this land are throughout the county, but most are in the eastern and southern parts of the county.

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

For some soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

In some areas, land that does not meet the criteria for prime farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

## Forestland Productivity and Management

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

Owners of forestland in Paulding County have many objectives. These objectives include producing timber; conserving wildlife, soil, and water; preserving aesthetic values; and providing opportunities for recreational activities, such as commercial hunting.

The land base in Paulding County consists of 200,100 acres. Forestland covers approximately 57.4 percent of this land base. The forest landscape consists of four groups: loblolly/shortleaf pine group, oak/pine group, oak/hickory group, and oak/gum/cypress group. These four forestry groups cover over 114,857 acres (USDA–FS, 2010).

The loblolly/shortleaf pine group in the county includes 37,980 acres of naturally forested stands. The county also has 13,769 acres of forest tracts that were artificially regenerated to the group. The total acreage of natural and planted trees in this group is 48,239 acres, which is about 42 percent of the forestland in the county.

The oak/pine group in the county consists of naturally forested stands. This group has 17,228 acres, which is about 15 percent of the forestland in the county.

The oak/hickory group in the county consists of 48,239 acres of natural stands across the county. This group covers about 42 percent of the forestland in the county.

The oak/gum/cypress group in the county consists of 1,149 acres of naturally forested tracts. Forest products in this group cover less than 1 percent of the total forestland in the county.

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

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

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

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

## Forestland Productivity

In table 7, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years (both 25 and 50 years are used in the southern United States). The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or online (USDA–NRCS, n.d.).

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

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

## Forestland Management

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

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less

than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

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

Rating class terms for seedling mortality are expressed as *low*, *moderate*, and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or online (USDA–NRCS, n.d.).

#### **Table 8a**

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

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

#### **Table 8b**

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erosion factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

#### **Table 8c**

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

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water

table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

## Recreational Development

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

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

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

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

### Table 9a

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

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic

areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

**Table 9b**

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

*Paths and trails* for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer (fig. 5).

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation



**Figure 5.**—A portion of the Silver Comet Trail, which was named for the Silver Comet train. The trail was converted from an abandoned rail line and is now part of the longest paved trail system in the country. This portion of the trail runs through an area of Fruithurst-Tallapoosa complex, 15 to 25 percent slopes.

is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## **Wildlife Habitat**

Soils affect the kind, amount, and vigor of vegetation available to wildlife as food and cover. The soils of Paulding County support a diversity of habitat that can sustain many wildlife species. Knowledge of soil types and the associated plant communities they support is valuable for the management of wildlife. Generally, wildlife occupy areas that are the most suitable for meeting their requirements for food, water, and cover. Understanding soil-vegetation relationships is important in creating and maintaining productive areas of wildlife habitat.

Soil surveys can be used in management programs, including those involving habitat improvement, species reintroduction, and creation of wildlife refuges. A variety of habitat for a diversity of wildlife is an important objective for the management of wildlife. The habitat needs of wildlife should be considered in all decisions involving land use and management. Fish and wildlife are important in the county; they provide opportunities for recreation and are resources that improve the local economy.

About 60 percent of Paulding County is forested. Some of the forestland supports hardwoods, some supports pine, and some supports mixed pine and hardwoods. The pastureland and forestland in the county provide good or fair habitat for wildlife.

Pastureland is interspersed with pine and hardwood forests in the survey area. Very deep, well drained, upland soils, such as Rion, Lloyd, and Pacolet soils, are important as cropland and pastureland. These soils support many native and domestic plants that are important to terrestrial wildlife. Abandoned pastures, old fields, and field borders support numerous woody and herbaceous plants that provide food and cover for white-tailed deer, turkey, rabbit, fox, bobwhite quail, songbirds, and other wildlife. The major native plants of importance to wildlife include greenbrier, lespedezas, croton, ragweed, partridge pea, clover, and sumac. Domestic plants of importance to wildlife include corn, soybeans, fescue, and small grains.

Pacolet, Madison, Rion, and Braswell soils are important for wildlife habitat on uplands. These soils support vegetation that provides habitat for white-tailed deer, turkey, raccoon, gray squirrel, opossum, fox, and other wildlife. The important overstory and understory forestland plants are sweetgum, blackgum, dogwood, oak, hickory, holly, blackberry, and maple. Young pine plantations and thinned stands of hardwoods are important areas that support numerous woody and herbaceous plants that provide food and cover for wildlife.

Large stands of mixed hardwoods grow well on the Cartecay and Toccoa soils in areas of bottomlands. These soils account for about 14,545 acres, or 7.3 percent, of Paulding County. Hardwood species include white oak, hickory, red maple, and tulip poplar. These areas support such species as gray squirrel, turkey, white-tailed deer, raccoon, beaver, and ducks. Wetland areas on the Wehadkee soils provide important habitat for waterfowl and a variety of furbearers, including otter, beaver, muskrat, and raccoon. Blackgum, green ash, alder, and a variety of herbaceous plants are important for wildlife in these areas. Wehadkee soils occupy about 1,440 acres, or about 0.7 percent, of the county.

Wildlife habitat can be improved by hedgerows, field borders, windbreaks, and stream buffers. The ability of pine plantations to support wildlife can be improved by retaining mast-producing trees, such as oak, wherever possible.

Paulding County has many small ponds and several miles of streams. Because of the fragile habitat requirements of fish, special efforts are needed to restrict both point and non-point sources of water pollution in the county. Good soil management practices for all types of land use are a primary consideration for controlling pollution in streams.

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.

Information about soils 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.

## Hydric Soils

This section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2010).

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

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

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2010) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2010).

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

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

The following map unit meets the definition of hydric soils and, in addition, has at least one of the hydric soil indicators. This listing can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

WtA Wehadkee silt loam, 0 to 2 percent slopes, occasionally flooded

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

CaA Cartecay sandy loam, 0 to 3 percent slopes, occasionally flooded

CfA Cedarbluff loam, 0 to 2 percent slopes, occasionally flooded

ChA Chewacla loam, 0 to 2 percent slopes, occasionally flooded

PeA Pettyjon loam, 0 to 2 percent slopes, occasionally flooded

ShA Shady loam, 0 to 2 percent slopes, occasionally flooded

StA Steadman silt loam, 0 to 2 percent slopes, occasionally flooded

ToA Toccoa sandy loam, 0 to 3 percent slopes, occasionally flooded

## Engineering

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

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

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

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

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, saturated hydraulic conductivity (Ksat), corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

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

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

## Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 10a and 10b show the degree and kind of soil limitations that affect dwellings with and without basements, lawns and landscaping, local roads and streets, and shallow excavations.

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

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

### Table 10a

*Dwellings* are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments (fig. 6).

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after



**Figure 6.**—Building site development for a new subdivision in an area of Lloyd-Agricola-Musella complex, 6 to 10 percent slopes, moderately eroded. Note the bedrock debris, which was unearthed in areas where the bedrock was near the surface. Lloyd soils are well suited for building sites, whereas Agricola and Musella soils are limited by moderately deep or shallow depth to bedrock.

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

#### **Table 10b**

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

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and

compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

## Sanitary Facilities

Table 11 shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

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

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

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

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor.

If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

## Construction Materials

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

*Sand* is a natural aggregate suitable for commercial use with a minimum of processing. It is used in many kinds of construction. Specifications for each use vary widely. In table 12, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand, the soil is considered a likely source regardless of thickness. The assumption is that the sand layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 12, the rating class terms are *good*, *fair*, and *poor*. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of roadfill and topsoil. The lower the number, the greater the limitation.

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

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

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

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

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

## Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and for embankments, dikes, and levees. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

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

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

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

# Soil Properties

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

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

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

The estimates of soil properties are shown in tables 14 through 17. They include engineering properties, pertinent soil and water features, and physical and chemical properties.

## Engineering Properties

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

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

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

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

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

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

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

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

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

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

## Soil Features

Table 15 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

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

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

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

## Water Features

Table 16 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

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

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The four hydrologic soil groups are:

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

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

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

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

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

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

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

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

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

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

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

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

## Physical and Chemical Properties

Table 17 shows estimates of some physical and chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

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

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

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

*Moist bulk density* is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at  $1/3$ - or  $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Permeability (Ksat)* refers to the ability of a soil to transmit water or air. The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

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

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

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

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

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

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

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

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

*Erosion factor  $K_f$*  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.



# Classification of the Soils

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The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2010). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

**ORDER.** Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

**SUBORDER.** Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

**GREAT GROUP.** Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

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

**FAMILY.** Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, thermic Typic Hapludalfs.

**SERIES.** The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example is the Rowan series.

Table 18 indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

## Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series

in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 2010). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Some of the typical pedons described in this survey are located in other counties. These soils, even though outside the survey area, are on landforms similar to those in Paulding County and have horizons that are very similar in thickness and other properties. The differences do not significantly affect the use and management of the soils.

## **Agricola Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from igneous and metamorphic rock, or both

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Moderately deep

*Slope:* 2 to 45 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Rhodic Kanhapludults

### ***Geographically Associated Soils***

- Lloyd soils, which are very deep to bedrock
- Musella soils, which are shallow to weathered bedrock
- Pacolet soils, which are very deep to bedrock and do not have a dark red subsoil

### ***Typical Pedon***

Agricola sandy loam in an area of Agricola-Lloyd-Musella complex, 15 to 25 percent slopes, moderately eroded; Paulding County, Georgia; 0.7 mile west of Coppermine Road on a maintenance road next to the Silver Comet Trail, 0.15 mile south to the top of the ridge, left on a farm road into an adjacent spray field, and downslope; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 53 minutes 3 seconds N. and long. 84 degrees 47 minutes 20 seconds W.

A—0 to 5 inches; dark reddish brown (5YR 3/4) sandy loam; moderate medium granular structure; friable; common very fine to medium roots; 1 percent gravel; neutral; clear smooth boundary.

BA—5 to 9 inches; 60 percent dark red (2.5YR 3/6) and 40 percent dark reddish brown (2.5YR 3/4) sandy loam; moderate medium granular structure; friable; common very fine and fine and few medium and coarse roots; 2 percent gravel; slightly acid; clear smooth boundary.

Bt—9 to 24 inches; dark red (2.5YR 3/6) clay loam; moderate fine subangular blocky structure; firm, moderately sticky; few very fine to coarse roots; common prominent clay films on faces of peds; 5 percent gravel; moderately acid; clear smooth boundary.

BC—24 to 34 inches; dark red (2.5YR 3/6) cobbly sandy clay loam; weak fine subangular blocky structure; firm; few very fine to medium roots; 2 percent gravel and 20 percent cobbles; moderately acid; clear smooth boundary.

Cr—34 to 42 inches; weathered hornblende gneiss.

### ***Range in Characteristics***

*Thickness of the solum:* 20 to 40 inches

## Soil Survey of Paulding County, Georgia

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* More than 60 inches

*Rock fragments:* 0 to 25 percent gravel and cobbles throughout

*Reaction:* Very strongly acid to slightly acid, except where the surface has been limed

*A horizon:*

Color—hue of 10R to 7.5YR, value of 3, and chroma of 2 to 6

Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, or clay loam

*BA horizon:*

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

Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, or clay loam

*Bt horizon, upper part:*

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

Texture (fine-earth fraction)—clay, sandy clay, clay loam, or sandy clay loam

*Bt horizon, lower part:*

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

Texture (fine-earth fraction)—clay, sandy clay, clay loam, or sandy clay loam

*BC horizon:*

Color—hue of 10R to 5YR, value of 3 or 4, and chroma of 3 to 6

Texture (fine-earth fraction)—loam, clay loam, or sandy clay loam

*Cr horizon:*

Highly weathered, basic, crystalline, soft bedrock with seams and cracks that are commonly coated with red and dark red sandy clay loam, clay loam, or clay

### Allen Series

*Landform:* Hills and stream terraces

*Parent material:* Alluvium derived from sandstone and shale and/or colluvium and/or residuum

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 30 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Typic Paleudults

#### **Geographically Associated Soils**

- Aragon soils, which are on uplands and have more than 35 percent clay in the control section
- Waynesboro soils, which have more than 35 percent clay in the control section

#### **Typical Pedon**

Allen loam, 15 to 30 percent slopes; Whitfield County, Georgia; 0.3 mile south of the Catoosa-Whitfield County line on Old Ringgold Road, 0.4 mile west on Bucker Road, in a road cut on the west side of the road; Tunnel Hill, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 48 minutes 58 seconds N. and long. 85 degrees 6 minutes 3 seconds W.

Ap—0 to 5 inches; brown (7.5YR 5/4) loam; weak fine granular structure; very friable; common very fine to coarse roots; 10 percent sandstone gravel; very strongly acid; clear wavy boundary.

BA—5 to 14 inches; yellowish red (5YR 5/6) clay loam; weak fine subangular blocky structure; friable; common very fine to coarse roots; few faint clay films on faces of peds; 10 percent sandstone gravel; very strongly acid; gradual wavy boundary.

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Bt1—14 to 33 inches; red (2.5YR 4/6) clay loam; weak medium subangular blocky structure; friable; common very fine to coarse roots; few distinct and common faint clay films on faces of peds; 10 percent sandstone gravel; very strongly acid; gradual wavy boundary.

Bt2—33 to 51 inches; red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; friable; common very fine and fine and few medium and coarse roots; common distinct and common faint clay films on faces of peds; 10 percent sandstone gravel; very strongly acid; gradual wavy boundary.

Bt3—51 to 60 inches; red (2.5YR 4/8) clay; strong medium subangular blocky structure; firm; few very fine and fine roots; common prominent clay films on faces of peds; 5 percent sandstone gravel; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* More than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 25 percent in the A horizon and 0 to 15 percent in the B horizon

*Reaction:* Strongly acid or very strongly acid, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or (rarely) silt loam

*E horizon (where present):*

Color—hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 2 to 4

Texture—sandy loam, fine sandy loam, loam, or rarely silt loam

*BA or BE horizon (where present):*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6

Texture—clay loam

*Bt horizon, upper part:*

Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 6 to 8

Texture—loam, sandy clay loam, or clay loam

Mottles (where present)—few or common in shades of brown, yellow, and red

*Bt horizon, lower part:*

Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 6 to 8

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

Mottles (where present)—few, common, or many in shades of brown, yellow, and red

## **Altavista Series**

*Landform:* Stream terraces

*Parent material:* Loamy fluvial sediments

*Drainage class:* Moderately well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 6 percent

*Taxonomic classification:* Fine-loamy, mixed, semiactive, thermic Aquic Hapludults

### **Geographically Associated Soils**

- Cartecay soils, which have a coarse-loamy particle-size control section and are somewhat poorly drained
- Wickham soils, which are well drained

### **Typical Pedon**

Altavista sandy loam, 2 to 6 percent slopes; Fulton County, Georgia; 1.5 miles west of Cowart Lake; 2,000 feet south of Camp Creek and 1,200 feet east of Enon Road; Ben Hill, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 40 minutes 18 seconds N. and long. 84 degrees 34 minutes 16 seconds W.

- A—0 to 5 inches; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; common very fine and fine and few medium and coarse roots; 1 percent gravel and 4 percent cobbles; moderately acid; clear smooth boundary.
- BE—5 to 12 inches; yellowish brown (10YR 5/4) sandy loam; weak fine subangular blocky structure; friable; few very fine to medium roots; 2 percent cobbles; moderately acid; clear smooth boundary.
- Bt1—12 to 25 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; common distinct clay films on faces of peds; few fine dark masses; 4 percent gravel; moderately acid; clear smooth boundary.
- Bt2—25 to 47 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common fine and few very fine roots; few faint clay films on faces of peds; few fine faint yellowish brown (10YR 5/8) masses of oxidized iron; common fine prominent light gray (2.5Y 7/2) iron depletions; moderately acid; clear smooth boundary.
- BC—47 to 57 inches; light yellowish brown (2.5Y 6/3) and very pale brown (10YR 7/3) sandy clay loam; weak fine subangular blocky structure; friable; few fine distinct brownish yellow (10YR 6/8) masses of oxidized iron; moderately acid; clear smooth boundary.
- Cg1—57 to 74 inches; 65 percent light brownish gray (2.5Y 6/2) and 35 percent light yellowish brown (2.5Y 6/3) loam; massive; friable; few fine prominent brownish yellow (10YR 6/8) masses of oxidized iron; moderately acid; clear smooth boundary.
- Cg2—74 to 80 inches; light gray (2.5Y 7/1) sandy clay loam; massive; friable; few fine prominent brownish yellow (10YR 6/8) masses of oxidized iron; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 30 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Reaction:* Extremely acid to moderately acid, except where the surface has been limed

*Rock fragments:* 0 to 5 percent gravel in the A and B horizons and 0 to 30 percent gravel in the C horizon

*Other features:* Few or common flakes of mica in the B and C horizons in most pedons

*A or Ap horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4

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

*E horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8

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

*BE horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8

Texture—fine sandy loam, sandy loam, loam, or sandy clay loam

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8

## Soil Survey of Paulding County, Georgia

Texture—dominantly loam, clay loam, or sandy clay loam; fine sandy loam or sandy loam in some subhorizons in some pedons; less than 30 percent silt  
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red and iron depletions (within the upper 24 inches of the Bt horizon) in shades of olive or gray

### *Btg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2  
Texture—dominantly loam, clay loam, or sandy clay loam; fine sandy loam or sandy loam in some subhorizons in some pedons; less than 30 percent silt  
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red and iron depletions (within the upper 24 inches of the Bt horizon) in shades of olive or gray

### *BC horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8  
Texture—sandy loam, loam, sandy clay loam, fine sandy loam, loamy fine sand, or loamy sand  
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red and iron depletions in shades of olive or gray

### *C horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8  
Texture (fine-earth fraction)—typically sandy or loamy sediment consisting of sand, fine sand, coarse sand, loamy sand, loamy fine sand, loamy coarse sand, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; a few pedons have a clayey 2C horizon.  
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red and iron depletions in shades of olive or gray

### *Cg horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 7  
Texture (fine-earth fraction)—typically sandy or loamy sediment consisting of sand, fine sand, coarse sand, loamy sand, loamy fine sand, loamy coarse sand, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam  
Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red and iron depletions in shades of olive or gray

## **Appling Series**

*Landform:* Hills

*Parent material:* Residuum weathered from igneous and metamorphic rock

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 10 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Kanhapludults

### ***Geographically Associated Soils***

- Hard Labor soils, which have a perched water table and are moderately well drained
- Pacolet soils, which have a subsoil that is thinner and redder than that of the Appling soils
- Rion soils, which have a fine-loamy particle-size control section

### **Typical Pedon**

Appling sandy loam, 2 to 6 percent slopes; Jasper County, Georgia; 4.2 miles north of Monticello, Georgia, on Georgia Highway 11 to the intersection with Liberty Church Road, 0.8 mile northwest on Georgia Highway 11, and about 2,200 feet northeast of the road; Farrar, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 23 minutes 39 seconds N. and long. 83 degrees 44 minutes 53 seconds W.

- A—0 to 6 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; very friable; common very fine roots; strongly acid; clear smooth boundary.
- BA—6 to 10 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium subangular blocky structure; firm; few very fine roots; very strongly acid; gradual wavy boundary.
- Bt1—10 to 32 inches; yellowish brown (10YR 5/8) sandy clay; common medium distinct brownish yellow (10YR 6/6) and common medium prominent yellowish red (5YR 5/8) mottles; moderate medium subangular blocky structure; firm; few very fine roots; few distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.
- Bt2—32 to 41 inches; yellowish brown (10YR 5/8) sandy clay; common medium distinct very pale brown (10YR 8/4) and common fine distinct yellowish red (5YR 5/8) mottles; moderate medium subangular blocky structure; firm; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.
- BC—41 to 51 inches; 34 percent yellowish brown (10YR 5/8), 33 percent strong brown (7.5YR 5/8), and 33 percent pale yellow (2.5Y 7/4) sandy clay loam; massive; friable; very strongly acid; pockets of sandy loam; gradual wavy boundary.
- C—51 to 60 inches; 34 percent yellowish brown (10YR 5/8), 33 percent red (2.5YR 4/8), and 33 percent light yellowish brown (2.5Y 6/4) sandy clay; massive; firm; very strongly acid; pockets of sandy clay loam and sandy loam.

### **Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 10 percent gravel in the A and E horizons and 0 to 8 percent gravel in the B horizon

*Reaction:* Very strongly acid or strongly acid, except where lime has been applied

*Other features:* Few or common flakes of mica in the A and B horizons and few to many in the BC and C horizons in most pedons

*A or Ap horizon:*

Color—hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 6

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

*E horizon (where present):*

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 6

Texture—sandy loam or loamy sand

*BA or BE horizon:*

Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 3 to 8

Texture—sandy clay loam or sandy loam

*Bt horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8; pedons with hue of 5YR have evident patterns of mottling in a subhorizon of the Bt horizon.

Texture—clay loam, sandy clay, or clay

Mottles—few to many in shades of red, yellow, and brown

*BC horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8; or mottled in these colors

## Soil Survey of Paulding County, Georgia

Texture—sandy clay loam

Mottles—common or many in shades of red, yellow, and brown

### *C horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8; or mottled in these colors

Texture—sandy clay or sandy clay loam; pockets of loamy material in some pedons

Mottles—common or many in shades of red, yellow, and brown

## **Aragon Series**

*Landform:* Ridges

*Parent material:* Residuum weathered from sandstone and shale, residuum weathered from cherty limestone, or both

*Drainage class:* Well drained

*Permeability class:* Slow

*Depth class:* Very deep

*Slope:* 2 to 10 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Hapludults

### ***Geographically Associated Soils***

- Allen soils, which are fine-loamy and have less than 35 percent clay in the control section

### ***Typical Pedon***

Aragon sandy loam, 6 to 10 percent slopes; Bartow County, Georgia; 1.1 miles west of Tom Jones Road on Georgia Highway 293, in road cut on the south side of the road; Kingston, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 14 minutes 22 seconds N. and long. 84 degrees 59 minutes 11 seconds W.

Ap—0 to 5 inches; brown (10YR 4/3) sandy loam; moderate fine and medium granular structure; very friable; few fine and medium roots; 5 percent gravel; strongly acid; abrupt smooth boundary.

BA—5 to 13 inches; yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable; few fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary.

Bt1—13 to 19 inches; yellowish brown (10YR 5/8) clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; few faint clay films on faces of peds; 2 percent gravel; very strongly acid; clear wavy boundary.

Bt2—19 to 29 inches; red (2.5YR 4/6) clay; common medium distinct brownish yellow (10YR 6/8) mottles; moderate medium subangular blocky structure parting to moderate fine angular blocky; firm; few fine and medium roots; common distinct clay films on faces of peds; 2 percent gravel; very strongly acid; clear wavy boundary.

Bt3—29 to 46 inches; red (2.5YR 4/6) silty clay; common medium prominent yellowish brown (10YR 5/6) and common medium prominent gray (2.5Y 6/1) mottles; moderate medium subangular blocky structure parting to moderate fine angular blocky; firm; few medium roots; common distinct clay films on faces of peds; 2 percent gravel; very strongly acid; gradual wavy boundary.

BC1—46 to 58 inches; 45 percent yellowish red (5YR 4/6), 30 percent yellowish brown (10YR 5/8), and 20 percent gray (10YR 6/1) silty clay loam; weak medium angular blocky structure; firm; common distinct clay films on faces of peds; 2 percent gravel; very strongly acid; gradual wavy boundary.

BC2—58 to 64 inches; 45 percent red (2.5YR 5/8), 30 percent brownish yellow (10YR 6/8), and 20 percent pale brown (10YR 6/3) silty clay loam; weak medium and

## Soil Survey of Paulding County, Georgia

coarse subangular blocky structure; firm; few distinct clay films on faces of peds;  
2 percent gravel; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 15 percent, by volume, chert fragments throughout

*Reaction:* Strongly acid to extremely acid, except where lime has been applied

*A or Ap horizon:*

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

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

*BA horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8

Texture—loam, clay loam, or sandy clay loam

Mottles (where present)—few or common in shades of red and brown

*Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 6 to 8

Texture—dominantly clay and silty clay; clay loam in the Bt1 horizon in some pedons

Mottles (where present)—few, common, or many in shades of yellow, brown, red, and gray; gray colors are from the parent material.

*BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 2 to 8

Texture—sandy clay loam or silty clay loam

Mottles (where present)—few, common, or many in shades of yellow, brown, red, and gray; gray colors are from the parent material.

*C horizon (where present):*

Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 6 to 8

Texture—sandy clay loam

Mottles—common or many in shades of red, yellow, brown, and gray

## **Braswell Series**

*Landform:* Hills

*Parent material:* Residuum weathered from phyllite (fig. 7)

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 25 percent

*Taxonomic classification:* Fine-loamy, mixed, semiactive, thermic Typic Hapludults

### **Geographically Associated Soils**

- Fruithurst soils, which are moderately deep to weathered bedrock
- Tallapoosa soils, which are shallow to weathered bedrock

### **Typical Pedon**

Braswell sandy loam in an area of Fruithurst-Braswell complex, 6 to 15 percent slopes; Paulding County, Georgia; 800 feet south of the Bartow County line and 25 feet east of Highway 61; Burnt Hickory Ridge, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 4 minutes 49 seconds N. and long. 84 degrees 50 minutes 3 seconds W.



**Figure 7.—Profile of Braswell sandy loam. This soil formed in residuum from phyllite and has a higher content of silt than is typical for the area.**

## Soil Survey of Paulding County, Georgia

- A—0 to 6 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; friable; many very fine and fine and common medium roots; 5 percent gravel; strongly acid; clear smooth boundary.
- BE—6 to 11 inches; strong brown (7.5YR 4/6) loam; weak fine subangular blocky structure; friable; common fine and few medium and coarse roots; few very fine and fine flakes of mica; 2 percent gravel; strongly acid; clear smooth boundary.
- Bt1—11 to 21 inches; yellowish red (5YR 5/6) clay loam; moderate fine subangular blocky structure; firm; few very fine and fine roots; common distinct clay films on faces of peds; few very fine and fine flakes of mica; strongly acid; clear smooth boundary.
- Bt2—21 to 33 inches; yellowish red (5YR 4/6) clay loam; common fine faint red (2.5YR 4/6) mottles; moderate fine subangular blocky structure; firm; common very fine and fine roots; common distinct clay films on faces of peds; few very fine and fine flakes of mica; very strongly acid; clear smooth boundary.
- BC—33 to 48 inches; red (2.5YR 5/6) loam; common medium distinct reddish yellow (7.5YR 6/6) mottles; weak fine subangular blocky structure; firm; common very fine and fine roots; few faint clay films on faces of peds; few very fine flakes of mica; strongly acid; clear wavy boundary.
- C—48 to 80 inches; light brown (7.5YR 6/4), pinkish gray (7.5R 7/2), and light reddish brown (5YR 6/4) sandy loam; massive; firm; few very fine to medium roots; few fine and common very fine flakes of mica; very strongly acid.

### ***Range in Characteristics***

*Thickness of the solum:* 20 to 60 inches

*Depth to bedrock:* More than 60 inches

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*Rock fragments:* 0 to 35 percent, by volume, gravel throughout

*Other features:* Few or common flakes of mica in the A, BE, and Bt horizons in some pedons and few to many in the BC and C horizons

#### *A horizon:*

Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—loam, sandy loam, fine sandy loam, or silt loam

#### *BE or (where present) E horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 5, and chroma of 4 to 8

Texture (fine-earth fraction)—loam, sandy loam, or fine sandy loam

#### *Bt horizon:*

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

Texture (fine-earth fraction)—clay loam, silty clay loam, sandy clay loam, loam, or silt loam; more than 30 percent silt in the control section

#### *BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Mottles (where present)—few or common in shades of red, yellow, brown, and gray

#### *C horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 2 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Mottles (where present)—few or common in shades of red, yellow, brown, and gray

## Cartecay Series

*Landform:* Flood plains

*Parent material:* Loamy alluvium

*Drainage class:* Somewhat poorly drained

*Permeability class:* Moderately rapid

*Depth class:* Very deep

*Slope:* 0 to 3 percent

*Taxonomic classification:* Coarse-loamy, mixed, semiactive, nonacid, thermic Aquic Udifluvents

### **Geographically Associated Soils**

- Chewacla soils, which have a fine-loamy particle-size control section
- Toccoa soils, which are well drained or moderately well drained
- Wehadkee soils, which have a fine-loamy particle-size control section and are poorly drained or very poorly drained

### **Typical Pedon**

Cartecay sandy loam in an area of Cartecay-Toccoa complex, 0 to 2 percent slopes, occasionally flooded; Fulton County, Georgia; 1 mile southwest of Arnold Mill; 200 feet north of power line right-of-way and 2,200 feet east of Lackey Road, in a mixed hardwood forest; Mountain Park, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 6 minutes 18 seconds N. and long. 84 degrees 23 minutes 53 seconds W.

A—0 to 4 inches; brown (7.5YR 4/3) sandy loam; weak fine granular structure; very friable; common very fine to coarse roots; many fine flakes of mica; 2 percent gravel; moderately acid; clear smooth boundary.

C1—4 to 13 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; very friable; common fine and medium roots; many fine flakes of mica; 1 percent gravel and 1 percent cobbles; moderately acid; clear smooth boundary.

C2—13 to 26 inches; light olive brown (2.5Y 5/3) sandy loam; massive; very friable; few fine and very fine roots; common fine prominent reddish brown (5YR 4/4) masses of oxidized iron; few fine faint grayish brown (2.5Y 5/2) iron depletions; many very fine flakes of mica; strongly acid; clear smooth boundary.

Cg1—26 to 37 inches; dark grayish brown (10YR 4/2) and brown (10YR 4/3) sandy loam; massive; very friable; few fine and very fine roots; few fine prominent yellowish red (5YR 4/6) masses of oxidized iron; many very fine flakes of mica; 1 percent gravel and 1 percent cobbles; strongly acid; clear smooth boundary.

Cg2—37 to 50 inches; dark gray (10YR 4/1) sandy loam; massive; very friable; common fine prominent yellowish red (5YR 4/6) masses of oxidized iron; common fine flakes of mica; 5 percent gravel; moderately acid; clear smooth boundary.

Cg3—50 to 58 inches; gray (10YR 5/1) very gravelly loamy sand; massive; very friable; 2 percent cobbles and 45 percent gravel; moderately acid; clear smooth boundary.

Cg4—58 to 62 inches; 50 percent dark gray (10YR 4/1) and 50 percent dark grayish brown (10YR 4/2) sand; massive; very friable; 1 percent cobbles and 10 percent gravel; moderately acid; clear smooth boundary.

C'—62 to 66 inches; dark yellowish brown (10YR 4/6) sand; massive; very friable; 5 percent gravel; moderately acid.

### **Range in Characteristics**

*Content of flakes of mica:* Few to many throughout

*Rock fragments:* 0 to 10 percent gravel in the A horizon, 0 to 15 percent gravel in the C horizon, and 0 to 50 percent gravel in the Cg horizon

*Reaction:* Strongly acid to slightly acid throughout

## Soil Survey of Paulding County, Georgia

### *A horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 6  
Texture—sandy loam or loamy sand

### *C and C' horizons:*

Color—hue of 2.5YR to 10YR, value of 4 to 8, and chroma of 3 to 6  
Texture—sandy loam, loamy sand, or sand with thin strata of coarser or finer material  
Redoximorphic features—iron depletions within a depth of 20 inches in shades of olive or gray and masses of oxidized iron in shades of brown, yellow, or red

### *Cg horizon:*

Color—hue of 10YR, value of 4 to 6, and chroma of 1 or 2  
Texture (fine-earth fraction)—sandy loam, loamy sand, or sandy clay loam

## **Cedarbluff Series**

*Landform:* Stream terraces and depressions

*Parent material:* Alluvium derived from sandstone and shale

*Drainage class:* Somewhat poorly drained

*Permeability class:* Slow

*Depth class:* Very deep

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Fragiaquic Paleudults

### ***Geographically Associated Soils***

- Allen soils, which are on the higher terraces and uplands
- Aragon soils, which are on uplands and have more than 35 percent clay in the control section

### ***Typical Pedon***

Cedarbluff loam, 0 to 2 percent slopes, occasionally flooded; Bartow County, Georgia; 130 feet south of Wayside Road on Bidly Road and 120 feet east of the road in woods; Adairsville, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 19 minutes 59 seconds N. and long. 84 degrees 59 minutes 43 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loam; moderate medium granular structure; very friable; common fine and medium and few coarse roots; strongly acid; abrupt wavy boundary.

Bt—5 to 16 inches; light olive brown (2.5Y 5/4) clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; few faint clay films on faces of peds; common medium distinct strong brown (7.5YR 4/6) masses of oxidized iron; strongly acid; clear irregular boundary.

Btx1—16 to 27 inches; 55 percent grayish brown (2.5Y 5/2) and 45 percent yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; firm; moderately brittle portions comprise approximately 30 percent of the horizontal area; few fine and medium roots; few distinct clay films on faces of peds; strongly acid; clear irregular boundary.

Btx2—27 to 63 inches; 55 percent light brownish gray (2.5Y 6/2) and 45 percent yellowish brown (10YR 5/6) clay loam; moderate medium and coarse subangular blocky structure; firm; moderately brittle portions comprise approximately 60 percent of the horizontal area; few distinct clay films on faces of peds; few medium faint strong brown (7.5YR 4/6) and few medium prominent yellowish red (5YR 4/6) masses of oxidized iron; 5 percent gravel; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* More than 60 inches

*Reaction:* Moderately acid or strongly acid in the Ap horizon and strongly acid throughout the B horizon

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4

Texture—fine sandy loam, loam, or silt loam

*BE horizon (where present):*

Color—hue of 10YR, value of 5 or 6, and chroma of 3 or 4

Texture—loam

Redoximorphic features—masses of oxidized iron in shades of yellow and brown and iron depletions in shades of gray

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 4 to 8

Texture—loam, clay loam, or silty clay loam

Redoximorphic features—masses of oxidized iron in shades of yellow and brown and iron depletions in shades of gray

*Btx horizon:*

Color—mottled gray, yellowish brown, and yellow

Texture—loam, clay loam, or silty clay loam; content of clay in the upper 20 inches ranges from 18 to 35 percent; more than 20 percent silt

Redoximorphic features—masses of oxidized iron in shades of yellow and brown and iron depletions in shades of gray

## **Chewacla Series**

*Landform:* Flood plains

*Parent material:* Fine-loamy alluvium

*Drainage class:* Somewhat poorly drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts

### **Geographically Associated Soils**

- Cartecay soils, which are coarse-loamy
- Toccoa soils, which are well drained or moderately well drained and are coarse-loamy
- Wehadkee soils, which are very poorly drained or poorly drained

### **Typical Pedon**

Chewacla loam, 0 to 2 percent slopes, frequently flooded; Butts County, Georgia; 2,000 feet northeast of the bridge over Watson Creek on Georgia Highway 42; Jackson, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 18 minutes 27 seconds N. and long. 83 degrees 58 minutes 28 seconds W.

A—0 to 6 inches; dark brown (7.5YR 3/3) loam; weak fine granular structure; very friable; many fine roots; common fine flakes of mica; strongly acid; clear smooth boundary.

Bw1—6 to 14 inches; brown (7.5YR 4/4) clay loam; weak fine subangular blocky structure; friable; common fine roots; few fine flakes of mica; moderately acid; gradual wavy boundary.

## Soil Survey of Paulding County, Georgia

- Bw<sub>2</sub>—14 to 25 inches; brown (7.5YR 4/3) clay loam; weak fine subangular blocky structure; friable; few fine roots; common medium faint brown (7.5YR 5/2) iron depletions; common fine flakes of mica; strongly acid; clear wavy boundary.
- Bg—25 to 30 inches; very dark grayish brown (10YR 3/2) clay loam; weak medium subangular blocky structure; friable; few fine roots; many fine prominent yellowish red (5YR 5/6) masses of oxidized iron; strongly acid; clear wavy boundary.
- BCg—30 to 40 inches; dark gray (N 4/0) sandy clay loam; massive; very friable; strongly acid; clear wavy boundary.
- Cg—40 to 60 inches; gray (10YR 5/1) sandy clay loam; massive; friable; strongly acid; pockets of sandy clay material.

### **Range in Characteristics**

*Thickness of the solum:* 15 to 70 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* Less than 5 percent gravel in the A horizon and the upper part of the B horizon and up to 15 percent gravel in the lower part of the B horizon

*Reaction:* Very strongly acid to slightly acid to a depth of 40 inches and very strongly acid to mildly alkaline below 40 inches

*Other features:* Few, common, or many flakes of mica throughout in some pedons

#### *A or Ap horizon:*

Color—hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 1 to 6; where value is less than 4, the horizon is less than 7 inches thick.

Texture—fine sandy loam, sandy loam, loam, silt loam, or clay loam

#### *AB or BA horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 2 to 5, and chroma of 1 or 2

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

#### *Bw horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8

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

Redoximorphic features—common iron depletions with chroma of 2 or less within 24 inches of the surface; common masses of oxidized iron in shades of brown, yellow, or red

#### *Bg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

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

Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red in many pedons

#### *BC horizon (where present):*

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of brown, yellow, or red

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

Redoximorphic features—iron depletions with chroma of 2 or less; masses of oxidized iron in shades of brown, yellow, or red

#### *BCg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

## Soil Survey of Paulding County, Georgia

Texture—sandy clay loam, sandy loam, fine sandy loam, loam, clay loam, silt loam, or silty clay loam  
Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red in many pedons

### *C horizon (where present):*

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8  
Texture—sandy clay loam, loam, or sandy loam  
Redoximorphic features—iron depletions with chroma of 2 or less; masses of oxidized iron in shades of brown, yellow, or red

### *Cg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7  
Texture—sandy clay loam, loam, or sandy loam  
Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red in many pedons

## **Crawfordville Series**

*Landform:* Hills

*Parent material:* Residuum weathered from dark-colored mafic rocks

*Drainage class:* Somewhat poorly drained

*Permeability class:* Very slow

*Depth class:* Moderately deep

*Slope:* 2 to 25 percent

*Taxonomic classification:* Fine, mixed, active, thermic Albaquultic Hapludalfs

### ***Geographically Associated Soils***

- Wateree and Wynott soils, which are well drained

### ***Typical Pedon***

Crawfordville loamy sand, 2 to 6 percent slopes; Taliaferro County, Georgia; 1.1 miles northwest of the intersection of Center Hill School Road and Georgia Highway 22 and 215 feet southwest of Center Hill Church Road; Crawfordville, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 35 minutes 39 seconds N. and long. 82 degrees 56 minutes 12 seconds W.

A—0 to 2 inches; dark olive brown (2.5Y 3/3) loamy sand; weak medium granular structure; very friable; many very fine, fine, and medium and few coarse roots; very strongly acid; abrupt smooth boundary.

E—2 to 7 inches; light olive brown (2.5Y 5/6) loamy sand; common fine brown (7.5YR 4/4) organic stains; weak medium granular structure parting to single grained; very friable; common fine, common very fine, few medium, and few coarse roots; 5 percent gravel quartz; very strongly acid; abrupt wavy boundary.

Bt—7 to 11 inches; variegated 60 percent yellowish brown (10YR 5/8) and 40 percent strong brown (7.5YR 5/8) sandy clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine, fine, medium, and coarse roots; many prominent yellowish brown (10YR 5/4) clay films on all faces of peds; many medium black (7.5YR 2.5/1) manganese masses and common medium strong brown (7.5YR 5/8) iron-manganese concretions; strongly acid; clear smooth boundary.

Btss1—11 to 17 inches; dark yellowish brown (10YR 4/6) clay; moderate coarse subangular blocky structure; very firm, very sticky, very plastic; few medium, few fine, and few very fine roots; many prominent brown (10YR 5/3) clay films on all faces of peds and common distinct slickensides on vertical faces of peds; common

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medium and common fine distinct strong brown (7.5YR 5/8) masses of oxidized iron; many medium and many fine prominent grayish brown (2.5Y 5/2) iron depletions; 10 percent cobbles; strongly acid; clear wavy boundary.

**Btss2**—17 to 21 inches; variegated 60 percent light yellowish brown (2.5Y 6/3) and 40 percent gray (2.5Y 5/1) clay; moderate coarse subangular blocky structure; very firm, very sticky, very plastic; few fine, few medium, and few very fine roots; common distinct slickensides on vertical faces of peds and few prominent light olive brown (2.5Y 5/3) clay films on all faces of peds; few medium and few fine prominent strong brown (7.5YR 5/8) masses of oxidized iron; 5 percent cobbles; moderately acid; clear irregular boundary.

**Cg**—21 to 25 inches; dark greenish gray (5BG 4/1) sandy clay loam; massive; firm, moderately sticky, moderately plastic; few fine, few very fine, and few medium roots; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common medium prominent gray (2.5Y 6/1) iron depletions; slightly acid; abrupt irregular boundary.

**Cr**—25 to 28 inches; greenish gray, weathered bedrock.

### ***Range in Characteristics***

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* 40 to more than 60 inches

*Rock fragments:* 0 to 20 percent, by volume, in the A, Ap, and E horizons and 10 to 30 percent in the Bt and C horizons; mostly angular quartz and subangular, dark-colored, mafic pebbles and cobbles

*Reaction:* Very strongly acid to moderately acid in the A and E horizons, strongly acid to slightly acid in the Bt horizon, and moderately acid to neutral in the Btss and Cg horizons

*A or Ap horizon:*

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

Texture (fine-earth fraction)—loamy sand, loamy coarse sand, sandy loam, or coarse sandy loam

*E horizon:*

Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6

Texture (fine-earth fraction)—loamy sand, loamy coarse sand, sandy loam, or coarse sandy loam

*BE horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6

Texture (fine-earth fraction)—sandy clay loam or clay loam

Redoximorphic features (where present)—masses of oxidized iron in shades of red, brown, or yellow; iron depletions in shades of gray; and iron-manganese accumulations in shades of black or gray

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy clay, clay, or clay loam

Redoximorphic features (where present)—masses of oxidized iron in shades of red, brown, or yellow; iron depletions in shades of gray; and iron-manganese accumulations in shades of black or gray

*Btss horizon:*

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

Texture (fine-earth fraction)—clay

Redoximorphic features—masses of oxidized iron in shades of red, brown, or yellow; iron or clay depletions in shades of gray within the upper 10 inches of

## Soil Survey of Paulding County, Georgia

the argillic horizon; and iron-manganese accumulations in shades of black or gray

### *Cg horizon:*

Color—multicolored with hue of 7.5YR to 5BG, value of 4 to 6, and chroma of 1 to 4; in some pedons, masses and streaks of green or black parent material or white saprolite

Texture (fine-earth fraction)—sandy clay loam or sandy clay

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

### *Cr horizon:*

Type of bedrock—weathered, moderately fractured to highly fractured, mafic rock

## **Fruithurst Series**

*Landform:* Hills

*Parent material:* Residuum weathered from phyllite

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Moderately deep

*Slope:* 6 to 60 percent

*Taxonomic classification:* Fine-loamy, mixed, semiactive, thermic Typic Hapludults

### ***Geographically Associated Soils***

- Braswell soils, which are very deep to bedrock
- Tallapoosa soils, which are shallow to weathered bedrock

### ***Typical Pedon***

Fruithurst channery fine sandy loam in an area of Fruithurst-Tallapoosa complex, 15 to 25 percent slopes; Bartow County, Georgia; 1 mile west of the intersection of Enon Ridge Road and Crystal Mountain Road and 0.15 mile north of the Bartow-Paulding County line; Burnt Hickory Ridge, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 5 minutes 4 seconds N. and long. 84 degrees 47 minutes 26 seconds W.

A—0 to 5 inches; brown (7.5YR 4/4) channery fine sandy loam; weak fine granular structure; very friable; common very fine to medium roots; 12 percent phyllite channers and 13 percent quartz gravel; very strongly acid; clear wavy boundary.

BA—5 to 9 inches; reddish brown (5YR 4/4) channery loam; weak fine and medium subangular blocky structure; friable; common fine and few medium roots; 15 percent channers; very strongly acid; clear wavy boundary.

Bt1—9 to 14 inches; yellowish red (5YR 4/6) channery loam; weak medium subangular blocky structure; friable; few fine and medium roots; few distinct clay films on faces of peds; 15 percent channers; very strongly acid; clear wavy boundary.

Bt2—14 to 19 inches; red (2.5YR 4/6) channery clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; common distinct clay films on faces of peds; 30 percent channers; very strongly acid; gradual wavy boundary.

Bt3—19 to 31 inches; red (2.5YR 4/6) channery silty clay loam; moderate medium subangular blocky structure; friable; few very fine to coarse roots; common distinct clay films on faces of peds; 25 percent channers; very strongly acid; gradual wavy boundary.

C—31 to 35 inches; red (2.5YR 4/6) very channery loam; massive; very friable; few fine and medium roots; 35 percent channers; very strongly acid; abrupt irregular boundary.

Cr—35 to 44 inches; weathered phyllite.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* More than 60 inches

*Rock fragments:* 0 to 35 percent gravel and cobbles throughout

*Reaction:* Very strongly acid or strongly acid, except where lime has been applied

*A horizon:*

Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—silt loam, loam, or fine sandy loam

*E or BE horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 or 4

Texture (fine-earth fraction)—silt loam, loam, or fine sandy loam

*BA horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 6

Texture (fine-earth fraction)—silt loam or loam

*Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 or 5, and chroma of 4 to 6; redder colors occur with increasing depth

Texture (fine-earth fraction)—clay loam, silty clay loam, loam, or silt loam; more than 30 percent silt in the control section; clay content increases with depth in most pedons

*C horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 6

Texture (fine-earth fraction)—loam or sandy loam

*Cr horizon:*

Type of bedrock—multicolored, highly weathered phyllite

## **Grover Series**

*Landform:* Hills

*Parent material:* Residuum weathered from mica schist, residuum weathered from muscovite schist, or both

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 6 to 45 percent

*Taxonomic classification:* Fine-loamy, micaceous, thermic Typic Hapludults

### **Geographically Associated Soils**

- Madison soils, which have a fine particle-size control section
- Mountain Park soils, which have soft bedrock at a depth of 20 to 40 inches
- Pacolet soils, which have a fine particle-size control section and have less mica than the Grover soils
- Rion soils, which have less mica than the Grover soils

### **Typical Pedon**

Grover gravelly sandy loam in an area of Grover-Mountain Park complex, 20 to 60 percent slopes, stony; Fulton County, Georgia; 1 mile southwest of the Northside Drive exit off I-285, about 100 feet south of Riverview Road, 300 feet southwest from trail fork on the right, and 150 feet downslope at 330 degrees; Sandy Springs, Georgia,

## Soil Survey of Paulding County, Georgia

USGS 7.5-minute quadrangle; lat. 33 degrees 53 minutes 39 seconds N. and long. 84 degrees 26 minutes 13 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 3/4) gravelly sandy loam; moderate fine granular structure; very friable; common very fine to coarse roots; many fine flakes of mica; 3 percent cobbles and 15 percent gravel; strongly acid; clear wavy boundary.

E—4 to 11 inches; yellowish brown (10YR 5/4) gravelly sandy loam; moderate fine granular structure; very friable; common very fine to coarse roots; many fine and medium flakes of mica; 3 percent cobbles and 17 percent gravel; strongly acid; clear smooth boundary.

BE—11 to 14 inches; 60 percent yellowish red (5YR 5/6) and 40 percent strong brown (7.5YR 5/8) sandy loam; weak fine subangular blocky structure; friable; common very fine and fine roots; many fine flakes of mica; 2 percent cobbles and 12 percent gravel; moderately acid; clear smooth boundary.

Bt—14 to 25 inches; 60 percent red (2.5YR 4/6) and 40 percent strong brown (7.5YR 5/6) sandy clay loam; moderate fine subangular blocky structure; friable; common very fine and fine and few medium and coarse roots; common distinct clay films on faces of peds; many fine and medium flakes of mica; 12 percent gravel; moderately acid; clear wavy boundary.

BC—25 to 31 inches; red (2.5YR 4/6) sandy loam; weak fine subangular blocky structure; friable; few very fine and fine roots; few faint clay films on faces of peds; many fine and medium flakes of mica; 2 percent gravel; moderately acid; clear wavy boundary.

C—31 to 80 inches; variegated 40 percent yellowish red (5YR 4/6), 35 percent red (2.5YR 4/6), and 25 percent strong brown (7.5YR 4/6) loamy sand; massive; very friable; few very fine roots; many fine and medium flakes of mica; moderately acid.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* More than 60 inches

*Reaction:* Very strongly acid to slightly acid in the A, Ap, and E horizons and very strongly acid to moderately acid in the Bt, BC, and C horizons

*Rock fragments:* 0 to 20 percent in the solum and 0 to 15 percent in the C horizon

*Other features:* Common or many flakes of mica in the A horizon and many flakes in the Bt, BC, and C horizons; content of mica increasing with depth

*A or Ap horizon:*

Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 6; where value is 3 or less, the horizon is less than 6 inches thick.

Texture (fine-earth fraction)—loam, sandy loam, fine sandy loam, or coarse sandy loam

*E horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8

Texture (fine-earth fraction)—loam, sandy loam, fine sandy loam, or coarse sandy loam

*BE or (where present) BA horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture—loam, sandy loam, fine sandy loam, or sandy clay loam

*Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay loam, clay loam, or loam

## Soil Survey of Paulding County, Georgia

### *BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8  
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

### *C horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8  
Texture—loam, sandy loam, fine sandy loam, or loamy sand

## Hard Labor Series

*Landform:* Hills

*Parent material:* Residuum weathered from igneous and metamorphic rock

*Drainage class:* Moderately well drained

*Permeability class:* Slow

*Depth class:* Very deep

*Slope:* 2 to 10 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Oxyaquic Kanhapludults

### **Geographically Associated Soils**

- Appling soils, which are well drained
- Pacolet soils, which are well drained and have a redder subsoil than that of the Hard Labor soils
- Rion soils, which are well drained and have a fine-loamy control section

### **Typical Pedon**

Hard Labor sandy loam, 2 to 6 percent slopes; Butts County, Georgia; 2.8 miles north of Jackson, Georgia, on Georgia Highway 36 to Old Bethel Road and 1,000 feet southwest into an open field; Jackson, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 19 minutes 55 seconds N. and long. 83 degrees 58 minutes 1 second W.

Ap—0 to 9 inches; dark brown (10YR 3/3) sandy loam; weak medium granular structure; very friable; many fine and few medium roots; strongly acid; clear smooth boundary.

BE—9 to 15 inches; yellowish brown (10YR 5/4) sandy clay loam; weak medium granular structure; friable; common fine roots; strongly acid; clear smooth boundary.

Bt1—15 to 26 inches; yellowish brown (10YR 5/8) sandy clay; weak medium subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—26 to 36 inches; yellowish brown (10YR 5/6) clay; weak medium subangular blocky structure; firm; common distinct clay films on faces of peds; common medium prominent red (2.5YR 4/6) masses of oxidized iron; strongly acid; gradual wavy boundary.

Bt3—36 to 50 inches; 35 percent red (2.5YR 4/6), 35 percent yellowish brown (10YR 5/6), and 30 percent light brownish gray (10YR 6/2) sandy clay; moderate medium platy structure; firm; common distinct clay films on faces of peds; strongly acid; gradual wavy boundary.

BC—50 to 60 inches; 40 percent red (2.5YR 4/6), 40 percent yellowish brown (10YR 5/8), and 20 percent very pale brown (10YR 7/3) sandy clay; moderate medium platy structure; firm; few faint clay films on faces of peds; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Content of flakes of mica (where present):* Few or common in the A, E, and Bt horizons and few, common, or many in the BC and C horizons

## Soil Survey of Paulding County, Georgia

*Rock fragments:* 0 to 6 percent gravel in the A and Bt horizons

*Reaction:* Very strongly acid to moderately acid

*A or Ap horizon:*

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

Texture—sandy loam or loamy sand

*E horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture—sandy loam or loamy sand

*BE or (where present) BA horizon:*

Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 3 to 8

Texture—sandy loam or sandy clay loam

*Bt horizon, upper part:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8

Texture—sandy clay, clay, or clay loam

Redoximorphic features—masses of oxidized iron in shades of red or brown in some pedons

*Bt horizon, lower part:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8; or variegated in shades of red, brown, and gray

Texture—sandy clay or clay

Redoximorphic features—iron depletions in shades of brown and gray and masses of oxidized iron in shades of red and brown

*BC horizon:*

Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8

Texture—sandy clay, sandy clay loam, or clay loam

Redoximorphic features—iron depletions in shades of brown and gray and masses of oxidized iron in shades of red and brown

*C horizon (where present):*

Color—hue of 2.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8

Texture—loamy saprolite

Redoximorphic features—iron depletions in shades of brown and gray and masses of oxidized iron in shades of red and brown

## Helena Series

*Landform:* Hills

*Parent material:* Residuum weathered from granite and gneiss, residuum weathered from hornblende gneiss, or both

*Drainage class:* Moderately well drained

*Permeability class:* Slow

*Depth class:* Very deep

*Slope:* 2 to 15 percent

*Taxonomic classification:* Fine, mixed, semiactive, thermic Aquic Hapludults

### **Geographically Associated Soils**

- Poindexter soils, which are well drained, fine-loamy, and moderately deep to soft bedrock
- Wateree soils, which are well drained and moderately deep to weathered bedrock
- Wilkes soils, which are well drained, shallow to soft bedrock, and loamy
- Wynott soils, which are well drained and moderately deep to soft bedrock

### **Typical Pedon**

Helena sandy loam, 2 to 6 percent slopes; Paulding County, Georgia; west 1,000 feet on Snote Jones Road from its intersection with Georgia Highway 61 and 100 feet southeast of the road; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 57 minutes 51 seconds N. and long. 84 degrees 51 minutes 30 seconds W.

- A—0 to 9 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; very friable; common very fine to medium roots; strongly acid; clear smooth boundary.
- E—9 to 14 inches; light olive brown (2.5Y 5/4) loam; weak fine subangular blocky structure; very friable; common very fine to medium roots; many medium yellow (10YR 7/8) iron-manganese masses; strongly acid; clear smooth boundary.
- Bt1—14 to 25 inches; strong brown (7.5YR 5/6) clay loam; moderate fine subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine and fine roots; common distinct clay films on faces of ped; few fine iron-manganese masses; very strongly acid; clear smooth boundary.
- Bt2—25 to 37 inches; strong brown (7.5YR 5/6) clay; moderate coarse angular blocky structure; very firm, moderately sticky, very plastic; common prominent clay films on faces of ped; many medium prominent grayish brown (10YR 5/2) iron depletions; strongly acid; abrupt smooth boundary.
- BC—37 to 49 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium angular blocky structure; firm, moderately sticky, slightly plastic; few distinct clay films on faces of ped; common fine prominent grayish brown (10YR 5/2) iron depletions; many fine iron-manganese masses; strongly acid; clear smooth boundary.
- C—49 to 60 inches; strong brown (7.5YR 5/6) sandy clay loam; massive; firm, slightly sticky, slightly plastic; common fine prominent gray (10YR 6/1) iron depletions; common fine iron-manganese masses; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 35 percent gravel throughout

*Reaction:* Extremely acid to strongly acid, except where lime has been applied

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4

Texture (fine-earth fraction)—loamy sand, loamy coarse sand, coarse sandy loam, fine sandy loam, sandy loam, or loam

*E horizon:*

Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 2 to 4

Texture (fine-earth fraction)—loamy sand, loamy coarse sand, coarse sandy loam, fine sandy loam, sandy loam, or loam

*BE or BA horizon (where present):*

Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 3 to 8

Texture (fine-earth fraction)—sandy clay loam or clay loam

*Bt horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 3 to 8

Texture (fine-earth fraction)—clay loam, sandy clay, or clay; thin subhorizons of sandy clay loam in some pedons

Redoximorphic features—iron depletions in shades of brown and gray and masses of oxidized iron in shades of red and brown

*Btg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

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Texture (fine-earth fraction)—clay loam, sandy clay, or clay; thin subhorizons of sandy clay loam in some pedons  
Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red

### *BC horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 3 to 8  
Texture (fine-earth fraction)—clay loam, sandy clay loam, loam, fine sandy loam, or sandy loam  
Redoximorphic features—iron depletions in shades of gray and masses of oxidized iron in shades of yellow, brown, or red

### *BCg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2  
Texture (fine-earth fraction)—clay loam, sandy clay loam, loam, fine sandy loam, or sandy loam  
Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red

### *C horizon:*

Color—hue of 5YR to 5Y, value of 5 to 8, and chroma of 3 to 8  
Texture (fine-earth fraction)—saprolite with a texture of sandy loam, fine sandy loam, sandy clay loam, or loam; bodies or seams of clay loam or clay in some pedons  
Redoximorphic features—iron depletions in shades of gray and masses of oxidized iron in shades of yellow, brown, or red

### *Cg horizon (where present):*

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or multicolored in shades of yellow and brown  
Texture (fine-earth fraction)—sandy loam, fine sandy loam, sandy clay loam, or loam; bodies or seams of clay loam or clay in some pedons  
Redoximorphic features—masses of oxidized iron in shades of brown or red

## **Lloyd Series**

*Landform:* Hills

*Parent material:* Residuum weathered from igneous and metamorphic rock, residuum weathered from amphibolite, or both

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 45 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Rhodic Kanhapludults

### ***Geographically Associated Soils***

- Agricola soils, which are moderately deep to weathered bedrock
- Musella soils, which are shallow to weathered bedrock
- Pacolet soils, which do not have a dark red subsoil

### ***Typical Pedon***

Lloyd sandy loam in an area of Lloyd-Gwinnett complex, 6 to 15 percent slopes, moderately eroded; Fulton County, Georgia; 1,900 feet south of Alpharetta business area; 2,000 feet east of Old Roswell Road and 200 feet west of a power line; Roswell, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 3 minutes 7 seconds N. and long. 84 degrees 18 minutes 32 seconds W.

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- A—0 to 4 inches; dark reddish brown (5YR 3/3) sandy loam; moderate fine granular structure; friable; many very fine to medium and common coarse roots; 3 percent cobbles and 6 percent gravel; moderately acid; clear smooth boundary.
- Bt1—4 to 25 inches; dark red (2.5YR 3/6) clay loam; moderate medium subangular blocky structure; friable; common very fine to medium and few coarse roots; common prominent clay films on faces of peds; 6 percent cobbles and 8 percent gravel; moderately acid; clear smooth boundary.
- Bt2—25 to 40 inches; reddish brown (2.5YR 4/4) sandy clay loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; common distinct clay films on faces of peds; few fine black (10YR 2/1) iron-manganese masses; moderately acid; clear smooth boundary.
- BC—40 to 48 inches; reddish brown (2.5YR 4/4) sandy loam; weak fine subangular blocky structure; friable; common fine black (10YR 2/1) iron-manganese masses; moderately acid; clear smooth boundary.
- C1—48 to 59 inches; brown (7.5YR 4/4) loamy fine sand; massive; friable; many medium black (10YR 2/1) iron-manganese masses; moderately acid; clear smooth boundary.
- C2—59 to 67 inches; reddish brown (5YR 5/4) sandy loam; massive; friable; 8 percent gravel; moderately acid; clear smooth boundary.
- C3—67 to 80 inches; yellowish red (5YR 4/6) sandy loam; massive; friable; few fine yellowish red (5YR 5/8) iron masses; 3 percent gravel; moderately acid.

### **Range in Characteristics**

*Thickness of the solum:* 40 to more than 60 inches

*Rock fragments:* 0 to 15 percent gravel and cobbles in the solum and 0 to 35 percent gravel and cobbles in the substratum

*Reaction:* Slightly acid to very strongly acid

*A or Ap horizon:*

Color—hue of 10R to 5YR, value of 2 to 4, and chroma of 2 to 6

Texture—sandy loam or sandy clay loam

*Bt horizon, upper part:*

Color—hue of 10R or 2.5YR, value of 2 or 3, and chroma of 4 to 8

Texture—clay loam or clay

*Bt horizon, lower part:*

Color—hue of 10R or 2.5YR, value of 3 or 4, and chroma of 4 to 8

Texture—clay loam, clay, or sandy clay loam

*BC horizon:*

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

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

*C horizon:*

Color—hue of 10R to 10YR, value of 3 to 5, and chroma of 4 to 8

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

## **Madison Series**

*Landform:* Hills

*Parent material:* Residuum weathered from igneous and metamorphic rock

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 6 to 10 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Kanhapludults

### **Geographically Associated Soils**

- Grover soils, which have a fine-loamy particle-size control section
- Mountain Park soils, which are moderately deep to soft bedrock and are fine-loamy
- Pacolet soils, which contain less mica than the Madison soils

### **Typical Pedon**

Madison sandy loam, 6 to 15 percent slopes; Jasper County, Georgia; 5.3 miles northeast of Monticello, Georgia, on Georgia Highway 83; about 300 feet west of the road; Monticello NE, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 21 minutes 51 seconds N. and long. 83 degrees 37 minutes 42 seconds W.

A—0 to 5 inches; yellowish brown (10YR 5/4) sandy loam; weak fine granular structure; very friable; many fine roots; few fine flakes of mica; strongly acid; clear smooth boundary.

Bt1—5 to 10 inches; yellowish red (5YR 5/6) sandy clay; weak medium subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; few fine flakes of mica; strongly acid; gradual wavy boundary.

Bt2—10 to 17 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; common fine flakes of mica; strongly acid; gradual wavy boundary.

Bt3—17 to 24 inches; red (2.5YR 4/6) sandy clay; moderate medium subangular blocky structure; firm; few fine roots; few faint clay films and few distinct clay films on faces of peds; many fine flakes of mica; strongly acid; gradual wavy boundary.

BC—24 to 38 inches; red (2.5YR 4/6) sandy clay loam; common medium prominent yellow (10YR 7/6) and common medium prominent strong brown (7.5YR 5/8) mottles; weak medium subangular blocky structure; friable; few fine roots; few distinct and few faint clay films on faces of peds; many fine and medium flakes of mica; strongly acid; gradual wavy boundary.

C1—38 to 50 inches; 34 percent yellowish red (5YR 5/8), 33 percent reddish yellow (7.5YR 6/8), and 33 percent brown (10YR 4/3) sandy clay loam; massive; very friable; many fine and many medium flakes of mica; strongly acid; gradual wavy boundary.

C2—50 to 60 inches; 34 percent brown (10YR 4/3), 33 percent yellowish red (5YR 5/8), and 33 percent reddish yellow (7.5YR 6/8) sandy loam; massive; very friable; many fine flakes of mica; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 50 inches

*Depth to bedrock:* More than 60 inches

*Content of flakes of mica:* Few to many in the A, E, BE, and BA horizons, common or many in the Bt horizon, and many in the BC and C horizons

*Rock fragments:* 0 to 5 percent gravel and cobbles throughout

*Reaction:* Moderately acid to very strongly acid, except where lime has been applied

*A or Ap horizon:*

Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 3 to 8

Texture—sandy loam or loam

*E horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 3 to 6

Texture—sandy loam

*BA or BE horizon (where present):*

Color—hue of 10R to 7.5YR, value of 4 to 6, and chroma of 3 to 8

Texture—sandy clay loam

*Bt horizon:*

Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8

Texture—clay loam, clay, sandy clay, or sandy clay loam

*BC horizon:*

Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 3 to 8; or multicolored in shades of red, yellow, or brown

Texture—sandy clay loam, sandy loam, or clay loam

*C horizon:*

Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 2 to 8; or multicolored in shades of red, brown, and yellow

Texture—sandy loam, loam, or sandy clay loam

## Mountain Park Series

*Landform:* Hills

*Parent material:* Residuum weathered from muscovite schist (fig. 8)

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Moderately deep

*Slope:* 6 to 45 percent

*Taxonomic classification:* Fine-loamy, micaceous, thermic Typic Hapludults

### **Geographically Associated Soils**

- Grover soils, which do not have bedrock within a depth of 60 inches
- Madison soils, which have a fine particle-size control section and do not have bedrock within a depth of 60 inches
- Rion soils, which do not have bedrock within a depth of 60 inches and contain less mica than the Mountain Park soils

### **Typical Pedon**

Mountain Park gravelly sandy loam in an area of Grover-Mountain Park complex, 20 to 60 percent slopes, stony; Fulton County, Georgia; 150 feet east of Juniper Street and 800 feet north of Rocky Creek; Mountain Park, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 4 minutes 57 seconds N. and long. 84 degrees 24 minutes 19 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 3/4) gravelly sandy loam; weak fine granular structure; friable; many very fine and fine and common medium and coarse roots; common fine flakes of mica; 6 percent cobbles and 24 percent gravel; very strongly acid; clear smooth boundary.

BE—4 to 10 inches; brown (7.5YR 4/4) gravelly sandy loam; weak fine subangular blocky structure parting to moderate fine granular; firm; many very fine and fine and common medium and coarse roots; many fine flakes of mica; 9 percent cobbles and 25 percent gravel; very strongly acid; clear wavy boundary.

Bt—10 to 23 inches; yellowish red (5YR 4/6) gravelly sandy clay loam; moderate fine subangular blocky structure; firm; common very fine to medium roots; common distinct clay films on faces of peds; many fine flakes of mica; 3 percent cobbles and 15 percent gravel; strongly acid; clear wavy boundary.

BC—23 to 32 inches; yellowish red (5YR 4/6) gravelly sandy loam; weak fine subangular blocky structure; firm; few very fine to medium roots; few faint clay films on faces of peds; many fine flakes of mica; 3 percent cobbles and 15 percent gravel; strongly acid; clear wavy boundary.

Cr—32 to 46 inches; weathered mica schist; clear wavy boundary.



Figure 8.— Typical profile of Mountain Park sandy loam. Mountain Park soils have a high content of mica and have weathered bedrock at a depth of about 81 centimeters (32 inches).

C—46 to 55 inches; strong brown (7.5YR 4/6) sandy loam; massive; friable; many fine flakes of mica; strongly acid; clear wavy boundary.

C<sub>r</sub>—55 to 65 inches; weathered mica schist.

#### ***Range in Characteristics***

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Content of flakes of mica:* Common or many in the A, E, or BE horizons and many in the B and C horizons

*Rock fragments:* 0 to 34 percent gravel or cobbles throughout

*Reaction:* Very strongly acid to slightly acid in the A and E horizons and very strongly acid to moderately acid in the Bt, BC, C horizons

## Soil Survey of Paulding County, Georgia

### *A horizon:*

Color—hue of 7.5YR or 10YR, value of 3 to 4, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, loam, fine sandy loam, or loamy sand

### *E horizon (where present):*

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8

Texture (fine-earth fraction)—sandy loam or loamy sand

### *BE horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam or sandy clay loam

### *Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam, sandy clay loam, or clay loam

### *BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam or sandy clay loam

### *Cr horizon:*

Type of bedrock—highly weathered mica schist

### *C horizon:*

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

Texture (fine-earth fraction)—loamy sand, sandy loam, or sandy clay loam

## **Musella Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Shallow

*Slope:* 2 to 45 percent

*Taxonomic classification:* Loamy, mixed, subactive, thermic, shallow Typic Rhodudults

### ***Geographically Associated Soils***

- Agricola soils, which are moderately deep to weathered bedrock
- Lloyd soils, which are very deep to bedrock
- Pacolet soils, which are very deep and do not have a dark red subsoil

### ***Typical Pedon***

Musella sandy loam in an area of Agricola-Lloyd-Musella complex, 25 to 45 percent slopes, stony, moderately eroded; Paulding County, Georgia; 0.7 mile west of Coppermine Road on the maintenance road next to Silver Comet Trail, 0.15 mile south to the top of a ridge, left on a farm road into adjacent spray field, south 800 feet along the ridge to the edge of a woods, and 100 feet downslope; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 53 minutes 1 second N. and long. 84 degrees 47 minutes 17 seconds W.

A—0 to 5 inches; dark reddish brown (5YR 3/4) sandy loam; moderate fine granular structure; friable; common very fine and fine roots; 5 percent gravel; moderately acid; clear smooth boundary.

Bt—5 to 16 inches; dark red (2.5YR 3/6) gravelly sandy clay loam; moderate fine subangular blocky structure; firm; few very fine and medium roots; few distinct clay films on faces of peds; 2 percent cobbles and 15 percent gravel; slightly acid; clear smooth boundary.

Cr—16 to 20 inches; weathered hornblende gneiss and amphibolite.

### **Range in Characteristics**

*Thickness of the solum:* 14 to 20 inches

*Depth to soft bedrock:* 14 to 20 inches

*Depth to hard bedrock:* More than 20 inches

*Rock fragments:* 5 to 35 percent in the A and Bt horizons, commonly gravel, cobbles, and stones. Stones occupy up to 15 percent on and in the surface layer.

*Reaction:* Strongly acid to neutral throughout the solum

*A horizon:*

Color—hue of 10R to 7.5YR, value of 3, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, loam, clay loam, or sandy clay loam

*Bt horizon:*

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

Texture (fine-earth fraction)—sandy clay loam, clay loam, or clay

*Cr horizon:*

Type of bedrock—weathered gneiss or a mixture of gneiss and schist; dark red loamy material filling fractures

## **Pacolet Series**

*Landform:* Hills

*Parent material:* Residuum weathered from igneous and metamorphic rock

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 15 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Kanhapludults

### **Geographically Associated Soils**

- Agricola soils, which are moderately deep and have a dark red subsoil
- Lloyd soils, which have a dark red subsoil
- Madison soils, which contain more mica in the solum than the Pacolet soils
- Musella soils, which are shallow and have a dark red subsoil
- Rion soils, which have a fine-loamy subsoil

### **Typical Pedon**

Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded; Paulding County, Georgia; 0.3 mile west of Coppermine Road on the maintenance road next to Silver Comet Trail, left (south) on the first field road, and 1,000 feet through a spray field on a farm road; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 53 minutes 2 seconds N. and long. 84 degrees 46 minutes 46 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 3/4) sandy loam; moderate fine granular structure; friable; many very fine and fine roots; few fine flakes of mica; 1 percent gravel; slightly acid; clear wavy boundary.

Bt—4 to 25 inches; red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; firm; few very fine and fine roots; common distinct clay films on faces of peds; few very fine and fine flakes of mica; 1 percent gravel; strongly acid; clear smooth boundary.

BC—25 to 43 inches; red (2.5YR 4/8) and light red (2.5YR 6/6) sandy loam; weak fine subangular blocky structure; firm; few very fine roots; few faint clay films on faces of peds; few fine and common very fine flakes of mica; very strongly acid; gradual smooth boundary.

C—43 to 80 inches; 60 percent yellowish red (5YR 5/8) and 40 percent strong brown (7.5YR 5/8) sandy loam; massive; firm; few fine and common very fine flakes of mica; very strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 50 inches

*Depth to bedrock:* More than 60 inches

*Content of flakes of mica:* Few or common in the solum in some pedons and few to many in the C horizon

*Rock fragments:* 0 to 15 percent gravel and 0 to 5 percent cobbles in the A horizon; 0 to 12 percent gravel and 0 to 5 percent cobbles in the B horizon

*Reaction:* Very strongly acid to slightly acid

*A horizon:*

Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam or sandy clay loam

*BA or BE horizon (where present):*

Color—hue of 5YR or 7.5YR, value of 4 or 5, and chroma of 4 to 6

Texture (fine-earth fraction)—sandy clay loam

*Bt horizon:*

Color—hue of 2.5YR, value of 4 or 5, and chroma of 6 to 8

Texture (fine-earth fraction)—clay loam, clay, or sandy clay

Mottles (where present)—few or common in shades of red, yellow, or brown

*BC horizon:*

Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8

Texture (fine-earth fraction)—sandy clay loam

Mottles (where present)—few to many in shades of red, yellow, or brown

*C horizon:*

Color—hue of 10R to 10YR, value of 4 or 5, and chroma of 6 to 8

Texture (fine-earth fraction)—sandy loam

Mottles (where present)—common or many in shades of red, yellow, or brown

## **Pettyjon Series**

*Landform:* Flood plains

*Parent material:* Loamy alluvium derived from sedimentary rock

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-loamy, mixed, active, thermic Dystric Fluventic Eutrudepts

### **Geographically Associated Soils**

- Steadman soils, which are moderately well drained and fine-silty
- Toccoa soils, which are coarse-loamy

### **Typical Pedon**

Pettyjon loam, 0 to 2 percent slopes, occasionally flooded; Bartow County, Georgia; 0.7 mile west of Kincannon Road on Georgia Highway 113 to a field road on the south side of the highway, 0.3 mile south on the field road to sharp curve, 0.2 mile southeast on a field road to a field ditch, and 1,350 feet south-southeast in a cultivated field;

## Soil Survey of Paulding County, Georgia

Taylorville, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 6 minutes 18 seconds N. and long. 84 degrees 53 minutes 17 seconds W.

- Ap—0 to 12 inches; dark yellowish brown (10YR 4/4) loam; weak medium granular structure; friable; few fine roots; slightly acid; abrupt smooth boundary.
- BA—12 to 19 inches; brown (10YR 4/3) clay loam; weak medium subangular blocky structure; friable; few fine roots; slightly acid; clear wavy boundary.
- Bw1—19 to 30 inches; 60 percent dark yellowish brown (10YR 4/6) and 40 percent dark brown (10YR 3/3) clay loam; moderate medium subangular blocky structure; friable; few very fine roots; slightly acid; clear wavy boundary.
- Bw2—30 to 46 inches; dark yellowish brown (10YR 4/4) loam; moderate medium subangular blocky structure; friable; few very fine roots; few medium dark brown (10YR 3/3) wormcasts; slightly acid; clear wavy boundary.
- Bw3—46 to 66 inches; dark yellowish brown (10YR 4/4) loam; common fine faint dark brown (10YR 3/3) mottles; weak medium subangular blocky structure; friable; few very fine roots; common fine faint pale brown (10YR 6/3) iron depletions; slightly acid; clear wavy boundary.
- C—66 to 80 inches; light yellowish brown (2.5Y 6/3) loam; massive; friable; few very dark grayish brown (10YR 3/2) manganese or iron-manganese stains; common fine distinct dark yellowish brown (10YR 4/6) masses of oxidized iron; common fine faint light brownish gray (10YR 6/2) iron depletions; common fine manganese masses; slightly acid.

### **Range in Characteristics**

*Thickness of the solum:* More than 40 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 5 percent throughout

*Reaction:* Slightly acid to slightly alkaline

#### *Ap horizon:*

Color—hue of 7.5YR or 10YR, value of 4, and chroma of 3 or 4

Texture—silt loam, loam, or fine sandy loam

#### *BA horizon:*

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6

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

#### *Bw horizon:*

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6

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

Mottles (where present)—few or common in shades of brown in the lower part of the horizon

Redoximorphic features (where present)—common iron depletions in shades of gray

#### *C horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 or 4

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

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

## **Poindexter Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Moderately deep

*Slope:* 6 to 60 percent

*Taxonomic classification:* Fine-loamy, mixed, active, thermic Typic Hapludalfs

### **Geographically Associated Soils**

- Rowan soils, which are deep
- Wilkes soils, which are shallow to weathered bedrock
- Wynott soils, which are fine and have at least 35 percent clay in the control section

### **Typical Pedon**

Poindexter gravelly sandy loam in an area of Poindexter-Wilkes-Rowan complex, 15 to 25 percent slopes, stony; Paulding County, Georgia; High Shoals Road to Black Forest Drive in Black Forest Subdivision, Black Forest Drive to Black Cabin Way, left on Black Cabin Way to the end of paved road, 400 feet to the top of a ridge, and 350 feet northeast; Yorkville, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 59 minutes 19 seconds N. and long. 84 degrees 52 minutes 39 seconds W.

A—0 to 8 inches; brown (10YR 4/3) gravelly sandy loam; moderate fine granular structure; friable; common very fine and fine and few medium and coarse roots; 15 percent gravel; strongly acid; clear wavy boundary.

BE—8 to 14 inches; brown (7.5YR 4/4) sandy loam; weak medium granular structure; friable; common very fine and fine roots; 8 percent gravel; strongly acid; clear wavy boundary.

Bt—14 to 24 inches; yellowish red (5YR 4/6) clay loam; moderate fine subangular blocky structure; firm; common very fine and fine roots; few distinct clay films on faces of ped; 5 percent gravel; moderately acid; clear wavy boundary.

BC—24 to 30 inches; yellowish red (5YR 4/6) sandy loam; weak fine subangular blocky structure; firm; few very fine and fine roots; few distinct clay films on faces of ped; 14 percent gravel; moderately acid; clear wavy boundary.

Cr—30 to 48 inches; weathered hornblende gneiss.

### **Range in Characteristics**

*Thickness of the solum:* 14 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* 40 to more than 60 inches

*Content of flakes of mica (where present):* Few, common, or many throughout, typically increasing with depth

*Rock fragments:* 0 to 35 percent throughout, consisting of quartz in the upper part of the solum and quartz or other acid or basic rocks in the lower part of the solum

*Reaction:* Very strongly acid to neutral

*A or Ap horizon:*

Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

*E horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

*BE or (where present) BA or EB horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

*Bt horizon:*

Color—5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—loam, silt loam, sandy clay loam, or clay loam

*BC horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, or silt loam

*C horizon (where present):*

Color—mottled in shades of brown, yellow, black, red, green, olive, white, and gray  
Texture (fine-earth fraction)—sandy loam, fine sandy loam, silt loam, sandy clay loam, or silty clay loam saprolite

*Cr horizon:*

Type of bedrock—weathered bedrock that is moderately to very highly fractured

*R layer (where present):*

Type of bedrock—unweathered bedrock

## **Rion Series**

*Landform:* Hills

*Parent material:* Residuum weathered from granite and gneiss

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 6 to 25 percent

*Taxonomic classification:* Fine-loamy, mixed, semiactive, thermic Typic Hapludults

### ***Geographically Associated Soils***

- Grover soils, which have more mica than the Rion soils
- Mountain Park soils, which are moderately deep to soft bedrock
- Pacolet soils, which have a fine particle-size control section
- Wateree soils, which have a coarse-loamy particle-size control section and are moderately deep to weathered bedrock

### ***Typical Pedon***

Rion sandy loam, 6 to 10 percent slopes; Paulding County, Georgia; East Paulding Drive to Mount Tabor Park, right on first road into a parking lot, 550 feet west on a paved trail, and 175 feet west of the trail; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 56 minutes 46 seconds N. and long. 84 degrees 46 minutes 24 seconds W.

A—0 to 4 inches; brown (10YR 4/3) sandy loam; moderate fine granular structure; friable; common very fine and fine and few medium and coarse roots; few fine flakes of mica; 3 percent cobbles and 5 percent gravel; moderately acid; clear smooth boundary.

BE—4 to 12 inches; strong brown (7.5YR 5/6) sandy loam; weak medium granular structure; friable; few very fine to medium roots; few fine flakes of mica; 5 percent gravel; strongly acid; clear smooth boundary.

Bt1—12 to 20 inches; strong brown (7.5YR 5/8) sandy clay loam; moderate fine subangular blocky structure; firm; few very fine to medium roots; common distinct clay films on faces of peds; few fine flakes of mica; 3 percent gravel; moderately acid; clear smooth boundary.

Bt2—20 to 28 inches; yellowish red (5YR 5/6 and 5/8) sandy clay loam; moderate fine subangular blocky structure; firm; few fine and medium roots; common distinct clay films on faces of peds; common fine flakes of mica; 2 percent gravel; moderately acid; clear smooth boundary.

BC—28 to 38 inches; 60 percent yellowish red (5YR 5/6) and 40 percent yellowish brown (10YR 5/4) sandy loam; weak fine subangular blocky structure; firm; few fine and medium roots; many fine flakes of mica; moderately acid; clear smooth boundary.

C—38 to 80 inches; light red (2.5YR 6/6) and light reddish brown (5YR 6/4) sandy loam; massive; firm; few fine roots; many fine flakes of mica; moderately acid.

### ***Range in Characteristics***

*Thickness of the solum:* 20 to 40 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 12 percent gravel and 0 to 10 percent cobbles in the A horizon, 0 to 6 percent gravel and 0 to 3 percent cobbles in the B horizon, and 0 to 12 percent gravel and 0 to 12 percent cobbles in the C horizon

*Reaction:* Very strongly acid to moderately acid throughout

*A horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6

Texture—sandy loam or loamy sand

*BE or (where present) E horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8

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

*Bt horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay loam or clay loam

Mottles (where present)—few or common in shades of red, brown, yellow, and gray in the lower part

*BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; mottles in shades of red, brown, yellow, gray, or white

Texture—sandy loam or sandy clay loam

Mottles (where present)—common or many in shades of red, brown, yellow, and gray

*C horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture—sandy loam or loamy sand

Mottles (where present)—common or many in shades of red, brown, yellow, and gray

## **Rowan Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 15 to 25 percent

*Taxonomic classification:* Fine-loamy, mixed, active, thermic Typic Hapludalfs

### ***Geographically Associated Soils***

- Poindexter soils, which are moderately deep to weathered bedrock
- Wilkes soils, which are shallow to weathered bedrock
- Wynott soils, which are moderately deep to weathered bedrock and contain more than 35 percent clay in the control section

### ***Typical Pedon***

Rowan gravelly sandy loam in an area of Poindexter-Wilkes-Rowan complex, 15 to 25 percent slopes, stony; Paulding County, Georgia; 0.2 mile west of the Bartow County line on Dabbs Bridge Road to Silvercrest Drive, south up the hill to the end of the constructed portion of Silvercrest Drive, and 100 feet east of the road; Acworth,

## Soil Survey of Paulding County, Georgia

Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 4 minutes 48 seconds N. and long. 84 degrees 44 minutes 27 seconds W.

- A—0 to 6 inches; brown (10YR 4/3) gravelly sandy loam; moderate fine granular structure; friable; many very fine and fine roots; 5 percent cobbles and 26 percent gravel; moderately acid; clear smooth boundary.
- Bt1—6 to 14 inches; yellowish brown (10YR 5/6) loam; moderate medium subangular blocky structure; firm; common very fine and fine roots; common distinct clay films on faces of peds; 10 percent gravel; moderately acid; clear wavy boundary.
- Bt2—14 to 25 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; few fine and medium roots; many distinct clay films on faces of peds; 5 percent gravel; slightly acid; clear wavy boundary.
- C1—25 to 36 inches; 50 percent brown (7.5YR 4/4), 30 percent yellowish red (5YR 5/6), and 20 percent pale brown (10YR 6/3) loam; massive; very firm; few very fine and fine roots; few prominent clay films on rock fragments; 3 percent gravel; neutral; clear wavy boundary.
- C2—36 to 66 inches; 50 percent light brown (7.5YR 6/4), 30 percent yellowish brown (10YR 5/6), and 20 percent yellowish red (5YR 4/6) fine sandy loam; massive; very firm; few very fine roots; 10 percent gravel; neutral; abrupt wavy boundary.
- R—66 to 70 inches; hornblende gneiss.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 50 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 45 percent in the A and E horizons and 0 to 35 percent in the B and C horizons

*Reaction:* Strongly acid to neutral in the A and E horizons, moderately acid to neutral in the B and BC horizons, and slightly acid to slightly alkaline in the C horizon

#### *A horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

#### *E horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 2 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

#### *Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8

Texture (fine-earth fraction)—loam, clay loam, or sandy clay loam

Mottles—shades of black, red, yellow, brown, olive, green, gray, or white in some pedons

#### *BC horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

Mottles—shades of black, red, yellow, brown, olive, green, gray, or white in some pedons

#### *C horizon:*

Color—hue of 5YR to 5Y, value of 4 to 8, and chroma of 1 to 8; or variegated in shades of black, red, yellow, brown, olive, green, gray, or white

Texture (fine-earth fraction)—loamy sand, loamy fine sand, fine sand, sandy loam, fine sandy loam, or loam

Mottles—shades of black, red, yellow, brown, olive, green, gray, or white in some pedons

## Sedgefield Series

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss, residuum weathered from granite and gneiss, or both

*Drainage class:* Somewhat poorly drained

*Permeability class:* Slow

*Depth class:* Very deep

*Slope:* 2 to 10 percent

*Taxonomic classification:* Fine, mixed, active, thermic Aquultic Hapludalfs

### **Geographically Associated Soils**

- Crawfordville soils, which are moderately deep to weathered bedrock
- Wateree soils, which are moderately deep to weathered bedrock and have a coarse-loamy control section

### **Typical Pedon**

Sedgefield sandy loam in an area of Sedgefield-Wateree complex, 2 to 10 percent slopes; Paulding County, Georgia; 1,200 feet northeast of the intersection of Mayfield Road and Marshall Fuller Road and 100 feet east of Marshall Fuller Road; New Georgia, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 49 minutes 35 seconds N. and long. 84 degrees 53 minutes 16 seconds W.

A—0 to 6 inches; brown (10YR 4/3) sandy loam; moderate fine granular structure; friable; common very fine and fine roots; 2 percent gravel; very strongly acid; clear smooth boundary.

E—6 to 10 inches; yellowish brown (10YR 5/4) sandy loam; weak fine granular structure; firm; common very fine and fine roots; 14 percent gravel; moderately acid; abrupt smooth boundary.

Bt1—10 to 18 inches; yellowish brown (10YR 5/6) clay; moderate medium angular blocky structure; very firm, moderately sticky, moderately plastic; common very fine and fine and few medium roots; common prominent clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—18 to 26 inches; 60 percent light yellowish brown (10YR 6/4) and 40 percent light gray (2.5Y 7/2) sandy clay; moderate fine subangular blocky structure; very firm, moderately sticky, moderately plastic; common very fine and few fine and medium roots; common prominent clay films on faces of peds; few fine prominent light brownish gray (2.5Y 6/2) iron depletions; 5 percent gravel; moderately acid; clear smooth boundary.

BCg—26 to 33 inches; light gray (2.5Y 7/2) clay loam; weak fine subangular blocky structure; very firm; few fine and medium roots; few faint clay films on faces of peds; many medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; common fine prominent light brownish gray (2.5Y 6/2) iron depletions; slightly acid; clear smooth boundary.

BC—33 to 41 inches; 40 percent brownish yellow (10YR 6/6), 31 percent strong brown (7.5YR 5/6), and 29 percent pale yellow (5Y 7/3) sandy clay; weak medium subangular blocky structure; firm; few fine and medium roots; few fine flakes of mica; slightly acid; clear smooth boundary.

C1—41 to 58 inches; 55 percent yellowish brown (10YR 5/6) and 45 percent light gray (2.5Y 7/2) sandy loam; massive; firm; few very fine roots; common fine flakes of mica; slightly acid; clear smooth boundary.

C2—58 to 80 inches; 60 percent light yellowish brown (2.5Y 6/4) and 40 percent light brownish gray (2.5Y 6/2) sandy loam; massive; firm; neutral.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 40 inches

*Depth to bedrock:* More than 60 inches

## Soil Survey of Paulding County, Georgia

*Rock fragments:* 0 to 15 percent in the A and E horizons

*Reaction:* Very strongly acid to slightly acid in the A horizon and the upper part of the Bt horizon and moderately acid to moderately alkaline in the lower part of the Bt horizon and in the C horizon

*A or Ap horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4

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

*E horizon:*

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

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

*BA or BE horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8

Texture—sandy loam or sandy clay loam

*Bt horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 6, and chroma of 3 to 8

Texture—clay loam, sandy clay, or clay

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

*Btg horizon (where present):*

Color—hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 1 or 2

Texture—clay loam, sandy clay, or clay

Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red

*BCg horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy loam, sandy clay loam, clay loam, or loam

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

*BC horizon:*

Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 3 to 8

Texture—clay loam, sandy clay, or clay

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

*C horizon:*

Color—7.5YR to 5Y, value of 5 to 7, and chroma of 3 to 8

Texture—sandy loam, sandy clay loam, clay loam, sandy clay, or loam

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

*Cg horizon (where present):*

Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 1 or 2

Texture—variable, including sandy loam, sandy clay loam, clay loam, sandy clay, or loam

Redoximorphic features—masses of oxidized iron in shades of yellow, brown, or red

## Shady Series

*Landform:* Stream terraces

*Parent material:* Loamy alluvium derived from sedimentary rock

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

## Soil Survey of Paulding County, Georgia

*Slope:* 0 to 6 percent

*Taxonomic classification:* Fine-loamy, mixed, subactive, thermic Typic Hapludults

### **Geographically Associated Soils**

- Allen soils, which are on high terraces and on uplands
- Cedarbluff soils, which are somewhat poorly drained
- Steadman soils, which are on flood plains and are moderately well drained

### **Typical Pedon**

Shady loam, 0 to 2 percent slopes, occasionally flooded; Bartow County, Georgia; 0.7 mile west of Kincannon Road on Georgia Highway 113 to a field road on the south side of the highway, 0.3 mile south on the field road to a sharp curve, 725 feet southeast on a field road to a field ditch, and 1,270 feet south in a cultivated field; Taylorsville, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 6 minutes 17 seconds N. and long. 84 degrees 53 minutes 30 seconds W.

Ap—0 to 11 inches; dark yellowish brown (10YR 4/4) loam; weak medium granular structure; very friable; few fine roots; 5 percent gravel; slightly acid; abrupt smooth boundary.

Bt1—11 to 26 inches; 60 percent strong brown (7.5YR 4/6) and 40 percent dark yellowish brown (10YR 4/4) clay loam; moderate medium subangular blocky structure; friable; few fine roots; very few faint clay films on faces of peds; 5 percent gravel; moderately acid; clear wavy boundary.

Bt2—26 to 40 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; friable; few fine roots; few distinct clay films in root channels and/or pores and few faint clay films on faces of peds; 5 percent gravel; strongly acid; clear wavy boundary.

BC—40 to 56 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common medium distinct light brown (7.5YR 6/3) iron depletions; few medium dark brown (7.5YR 3/2) iron-manganese masses; 5 percent gravel; strongly acid; clear wavy boundary.

C—56 to 60 inches; 60 percent yellowish brown (10YR 5/6) and 40 percent dark yellowish brown (10YR 4/4) gravelly sandy loam; massive; friable; 15 percent gravel; strongly acid.

### **Range in Characteristics**

*Thickness of the solum:* 30 to 60 inches

*Depth to bedrock:* More than 60 inches

*Content of flakes of mica (where present):* Few or common throughout

*Rock fragments:* 0 to 15 percent gravel and cobbles in the A and B horizons and 5 to 60 percent in the BC and C horizons

*Ap horizon:*

Color—hue of 10YR, value of 3 or 4, and chroma of 3 or 4; where both value and chroma are 3, the horizon is less than 7 inches thick.

Texture—loam or fine sandy loam

*Bt horizon:*

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 4 to 8

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

Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or red in some pedons

*BC horizon:*

Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 8

Texture—sandy clay loam, loam, or sandy loam

*C horizon:*

- Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6
- Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam or stratification of these textures
- Redoximorphic features—masses of oxidized iron in shades of brown, yellow, or gray in some pedons

## **Sipsey Series**

*Landform:* Hills

*Parent material:* Residuum weathered from sandstone and shale

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Moderately deep

*Slope:* 30 to 45 percent

*Taxonomic classification:* Fine-loamy, siliceous, semiactive, thermic Typic Hapludults

### ***Geographically Associated Soils***

- Allen soils, which are very deep and formed in alluvium or colluvium
- Sunlight soils, which are shallow and have 35 to 90 percent, by volume, coarse fragments
- Waynesboro soils, which are very deep, formed in old alluvium, and have more than 35 percent clay in the control section

### ***Typical Pedon***

Sipsey fine sandy loam in an area of Sunlight-Sipsey-Townley complex, 6 to 15 percent slopes; Gordon County, Georgia; about 2 miles west on Harris-Beamer Road from its intersection with Georgia Highway 156W, about 0.2 mile along a dirt road, and 100 feet northwest of the road at the toe of a hill; Calhoun South, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 29 minutes 25 seconds N. and long. 84 degrees 59 minutes 31 seconds W.

A—0 to 5 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium granular structure; very friable; many very fine to coarse roots; 10 percent sandstone or shale channers; moderately acid; clear smooth boundary.

Bt1—5 to 13 inches; strong brown (7.5YR 5/8) clay loam; weak fine and medium subangular blocky structure; friable; many very fine to coarse roots; common faint clay films on faces of peds; 10 percent sandstone or shale channers; moderately acid; gradual wavy boundary.

Bt2—13 to 24 inches; strong brown (7.5YR 5/8) clay loam; common medium prominent yellow (10YR 7/6) mottles; moderate medium subangular blocky structure; friable; common very fine and fine roots; common faint clay films on faces of peds; 10 percent sandstone or shale channers; moderately acid; gradual wavy boundary.

BC—24 to 27 inches; 45 percent very pale brown (10YR 7/3), 30 percent yellowish brown (10YR 5/6), and 25 percent brownish yellow (10YR 6/6) sandy clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds; 10 percent sandstone or shale channers; strongly acid; clear wavy boundary.

C—27 to 35 inches; 35 percent very pale brown (10YR 7/3), 33 percent yellowish brown (10YR 5/6), and 32 percent brownish yellow (10YR 6/6) fine sandy loam; massive; very friable; sandstone or shale channers; very strongly acid; pockets of silt loam; clear smooth boundary.

Cr—35 to 60 inches; weathered, interbedded sandstone and shale.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* More than 60 inches

*Rock fragments:* Dominantly 0 to 15 percent sandstone and siltstone fragments throughout; 15 to 35 percent coarse fragments in the Bt horizon in some pedons

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A horizon:*

Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 3 to 6

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

*E or EB horizon (where present):*

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

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

*Bt horizon:*

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

Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, or clay loam

Mottles (where present)—few or common in shades of brown or yellow in the lower part of the horizon

*BC and C horizons:*

Color—hue of 7.5YR or 10YR, value of 4 to 7, chroma of 3 to 6

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or sandy clay loam

Mottles (where present)—few, common, or many in shades of brown or yellow

*Cr horizon:*

Type of bedrock—level-bedded or cross-bedded, weathered sandstone or interbedded sandstone, siltstone, or shale that is rippable with heavy equipment and can be cut with hand tools in most places

## **Steadman Series**

*Landform:* Flood plains

*Parent material:* Alluvium derived from sedimentary rock

*Drainage class:* Moderately well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-silty, mixed, active, thermic Fluvaquentic Eutrudepts

### **Geographically Associated Soils**

- Pettyjon soils, which are well drained and fine-loamy
- Shady soils, which formed on stream terraces and are fine-loamy

### **Typical Pedon**

Steadman silt loam, 0 to 2 percent slopes, occasionally flooded; Bartow County, Georgia; 0.75 mile east on US Highway 411 from its intersection with Hamilton Crossing Road and 900 feet south of the road in woods; Cartersville, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 12 minutes 54 seconds N. and long. 84 degrees 51 minutes 29 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium granular structure; friable; common fine and medium roots; moderately acid; abrupt smooth boundary.

## Soil Survey of Paulding County, Georgia

- Bw1—4 to 16 inches; brown (7.5YR 4/4) silt loam; weak medium subangular blocky structure; friable; few fine and medium roots; common medium faint dark brown (7.5YR 3/4) masses of oxidized iron; few fine black (10YR 2/1) iron-manganese concretions and common medium distinct brown (10YR 5/3) iron depletions; moderately acid; clear wavy boundary.
- Bw2—16 to 24 inches; brown (7.5YR 4/4) silty clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; common medium faint dark brown (7.5YR 3/4) masses of oxidized iron; common fine and medium black (10YR 2/1) iron-manganese masses and common medium distinct brown (10YR 5/3) iron depletions; moderately acid; clear wavy boundary.
- Bw3—24 to 29 inches; light olive brown (2.5Y 5/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; common medium distinct dark yellowish brown (10YR 4/4) masses of oxidized iron; few fine black (10YR 2/1) iron-manganese concretions and few medium faint grayish brown (2.5Y 5/2) iron depletions; moderately acid; clear wavy boundary.
- Bw4—29 to 34 inches; light yellowish brown (2.5Y 6/3) silty clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; few medium faint brownish yellow (10YR 6/6) masses of oxidized iron; common fine black (10YR 2/1) iron-manganese concretions and common medium faint light brownish gray (2.5Y 6/2) iron depletions; moderately acid; clear wavy boundary.
- Bw5—34 to 45 inches; light yellowish brown (2.5Y 6/4) silty clay loam; moderate medium subangular blocky structure; firm; common coarse faint olive yellow (2.5Y 6/6) masses of oxidized iron; many medium black (10YR 2/1) iron-manganese concretions and few fine faint light brownish gray (2.5Y 6/2) iron depletions; slightly acid; clear wavy boundary.
- C—45 to 60 inches; 55 percent light yellowish brown (2.5Y 6/4) and 45 percent yellowish brown (10YR 5/6) silty clay; massive; firm; few coarse prominent strong brown (7.5YR 5/8) masses of oxidized iron; common medium distinct light gray (2.5Y 7/2) iron depletions; neutral.

### ***Range in Characteristics***

*Thickness of the solum:* 30 to more than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 5 percent in the solum and 0 to 35 percent in the C horizon; mostly small, rounded pebbles

*Reaction:* Moderately acid to slightly alkaline

*A or Ap horizon:*

Color—hue of 10YR, value of 3 or 4, and chroma of 3 or 4

Texture—silt loam, silty clay loam, or loam

*Bw horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture—silty clay loam or silt loam

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

*C horizon:*

Color—dominantly hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6; chroma of 2 below a depth of 40 inches in some pedons

Texture (fine-earth fraction)—silt loam, loam, clay loam, silty clay loam, or silty clay

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

## Sunlight Series

*Landform:* Hills

*Parent material:* Residuum weathered from sandstone and shale

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Shallow

*Slope:* 30 to 45 percent

*Taxonomic classification:* Loamy-skeletal, mixed, semiactive, thermic, shallow Inceptic Hapludults

### **Geographically Associated Soils**

- Allen soils, which are very deep and formed in alluvium and colluvium
- Sipsey soils, which are moderately deep and have 0 to 35 percent coarse fragments
- Waynesboro soils, which are very deep, formed in old alluvium, and have more than 35 percent clay in the control section

### **Typical Pedon**

Sunlight gravelly fine sandy loam in an area of Sunlight-Sipsey-Townley complex, 6 to 15 percent slopes; Gordon County, Georgia; 1.8 miles north of the Floyd-Gordon County line on Georgia Highway 53, about 1.8 miles west on Plainville Road, 0.8 mile north on Moores Ferry Road, on the east side of road in road cut just north of Scott Cemetery; Plainville, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 24 minutes 46 seconds N. and long. 85 degrees 2 minutes 37 seconds W.

A—0 to 5 inches; yellowish brown (10YR 5/4) gravelly fine sandy loam; weak fine granular structure; very friable; many very fine to coarse roots; 20 percent sandstone gravel; strongly acid; clear wavy boundary.

BE—5 to 10 inches; light yellowish brown (10YR 6/4) gravelly fine sandy loam; weak fine subangular blocky and weak medium granular structure; very friable; many very fine to coarse roots; 25 percent sandstone gravel; strongly acid; gradual wavy boundary.

Bt—10 to 15 inches; brownish yellow (10YR 6/6) very channery fine sandy loam; weak medium subangular blocky structure; friable; many very fine and fine and common medium and coarse roots; few prominent and common distinct clay films on faces of peds; 35 percent shale channers; very strongly acid; gradual wavy boundary.

Cr—15 to 60 inches; weathered, interbedded sandstone and shale.

### **Range in Characteristics**

*Thickness of the solum:* 10 to 20 inches

*Depth to soft bedrock:* 10 to 20 inches

*Rock fragments:* 10 to 25 percent gravel and channers in the A horizon, 25 to 35 percent gravel and channers in the BE horizon, and 35 to 90 percent channers in the Bt horizon

*Reaction:* Very strongly acid or strongly acid throughout

*A horizon:*

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

Texture (fine-earth fraction)—silt loam, sandy loam, fine sandy loam, or loam

*BE horizon:*

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8

Texture (fine-earth fraction)—silt loam, sandy loam, fine sandy loam, or loam

*Bt horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, silt loam, silty clay loam, or clay loam

*Cr horizon:*

Type of bedrock—weakly consolidated, fractured interbedded shaley siltstone, siltstone, and sandstone; pockets of soil material in the cracks

## **Tallapoosa Series**

*Landform:* Hills

*Parent material:* Residuum weathered from phyllite

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Shallow

*Slope:* 6 to 60 percent

*Taxonomic classification:* Loamy, mixed, semiactive, thermic, shallow Typic Hapludults

### ***Geographically Associated Soils***

- Braswell soils, which are very deep to bedrock
- Fruithurst soils, which are moderately deep to weathered bedrock

### ***Typical Pedon***

Tallapoosa channery fine sandy loam in an area of Fruithurst-Tallapoosa complex, 15 to 25 percent slopes; Bartow County, Georgia; 1 mile west of the intersection of Enon Ridge Road and Chrystal Mountain Road and 0.15 mile north of the Bartow-Paulding County line; Burnt Hickory Ridge, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 5 minutes 5 seconds N. and long. 84 degrees 47 minutes 25 seconds W.

A—0 to 4 inches; brown (10YR 4/3) channery fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; 15 percent channers; very strongly acid; clear wavy boundary.

BA—4 to 9 inches; dark yellowish brown (10YR 4/6) channery loam; weak medium subangular blocky structure; friable; common medium and coarse and few fine roots; few faint clay films on faces of peds; 20 percent channers; very strongly acid; clear wavy boundary.

Bt—9 to 15 inches; strong brown (7.5YR 4/6) channery loam; weak medium subangular blocky structure; friable; common medium and coarse and few fine roots; few distinct clay films on faces of peds; 30 percent channers; very strongly acid; clear wavy boundary.

Cr1—15 to 35 inches; weathered and fractured phyllite.

Cr2—35 to 39 inches; weathered phyllite.

### ***Range in Characteristics***

*Thickness of the solum:* 3 to 20 inches

*Depth to soft bedrock:* 10 to 20 inches

*Depth to hard bedrock:* More than 60 inches

*Rock fragments:* 0 to 35 percent, by volume, in the solum

*Reaction:* Very strongly acid or strongly acid throughout

*A horizon:*

Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6

Texture (fine-earth fraction)—sand, fine sandy loam, loam, or silt loam

*BA horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 6

Texture (fine-earth fraction)—loam or sandy loam

*Bt horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8  
Texture (fine-earth fraction)—loam, clay loam, silt loam, or silty clay loam

*C horizon (where present):*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or mottled in shades of brown, yellow, and red  
Texture—65 to 85 percent saprolite

*Cr horizon:*

Type of bedrock—weathered, micaceous schist or phyllite

## **Toccoa Series**

*Landform:* Flood plains

*Parent material:* Coarse-loamy alluvium

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Depth class:* Very deep

*Slope:* 0 to 3 percent

*Taxonomic classification:* Coarse-loamy, mixed, active, nonacid, thermic Typic Udifluvents

### ***Geographically Associated Soils***

- Cartecay soils, which are somewhat poorly drained
- Chewacla soils, which are fine-loamy and somewhat poorly drained
- Pettyjon soils, which are fine-loamy and well drained
- Wehadkee soils, which are fine-loamy and are poorly drained or very poorly drained

### ***Typical Pedon***

Toccoa sandy loam in an area of Cartecay-Toccoa complex, 0 to 2 percent slopes, occasionally flooded; Fulton County, Georgia; 2 miles northwest of Crabapple; 1,200 feet south and 2,100 feet east of New Providence Road on the north side of Copper Sandy Creek; Roswell, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 6 minutes 49 seconds N. and long. 84 degrees 21 minutes 46 seconds W.

Ap—0 to 6 inches; dark brown (7.5YR 3/3) sandy loam; moderate fine granular structure; friable; many very fine and fine and few medium roots; many fine flakes of mica; slightly acid; gradual smooth boundary.

C1—6 to 16 inches; reddish brown (5YR 4/4) sandy loam; massive; friable; common very fine and few medium and coarse roots; common fine flakes of mica; moderately acid; clear smooth boundary.

C2—16 to 29 inches; reddish brown (5YR 4/4) loamy sand; massive; friable; common very fine to medium and few coarse roots; common fine flakes of mica; slightly acid; clear smooth boundary.

C3—29 to 34 inches; reddish brown (5YR 4/4) sandy loam; massive; firm; common very fine to medium roots; many fine flakes of mica; slightly acid; clear smooth boundary.

C4—34 to 49 inches; dark yellowish brown (10YR 4/4) and brown (10YR 5/3) sandy loam; massive; firm; few fine and medium roots; few fine distinct dark yellowish brown (10YR 4/6) masses of oxidized iron; many fine flakes of mica; few coarse iron-manganese masses; slightly acid; clear smooth boundary.

C5—49 to 67 inches; brown (10YR 4/3) sandy loam; massive; firm; few fine and medium roots; common medium yellowish red (5YR 4/6) masses of oxidized iron; many fine flakes of mica; moderately acid; clear smooth boundary.

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C6—67 to 75 inches; yellowish red (5YR 4/6) and brown (10YR 4/3) loamy sand; massive; friable; few fine roots; few fine black (10YR 2/1) iron-manganese masses; few coarse iron-manganese concretions; moderately acid; clear smooth boundary.

Cg—75 to 85 inches; dark grayish brown (10YR 4/2) sand; single grain; friable; few fine roots; few fine prominent red (2.5YR 4/8) masses of oxidized iron; slightly acid.

### **Range in Characteristics**

*Rock fragments:* Dominantly 0 to 5 percent, by volume; up to 60 percent in subhorizons in the lower part

*Content of flakes of mica:* Few to many in the A and C horizons

*Reaction:* Dominantly strongly acid or moderately acid; some part of the control section is moderately acid or slightly acid

*Other features:* Bedding planes and thin strata of sandy or loamy material throughout the C horizon

*Ap or A horizon:*

Color—hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 3 or 4

Texture—sandy loam or loamy sand

*C horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8

Texture—sandy loam, fine sandy loam, or loamy sand; thin strata of contrasting texture in some pedons

Redoximorphic features—masses of oxidized iron in shades of red, yellow, or brown

*Cg horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 8

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

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

## **Wake Series**

*Landform:* Hills

*Parent material:* Residuum weathered from granite and gneiss

*Drainage class:* Excessively drained

*Permeability class:* Rapid

*Depth class:* Shallow

*Slope:* 6 to 60 percent

*Taxonomic classification:* Mixed, thermic Lithic Udipsamments

### **Geographically Associated Soils**

- Rion soils, which are fine-loamy and very deep
- Wateree soils, which are moderately deep to weathered bedrock

### **Typical Pedon**

Wake loamy sand in an area of Wateree-Wake complex, 15 to 25 percent slopes; Paulding County, Georgia; Industrial Boulevard to a sewer maintenance road next to a stream in the northwest corner of New Hope Ruritan Park, across the stream, and upslope 150 feet; Dallas, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 56 minutes 50 seconds N. and long. 84 degrees 49 minutes 38 seconds W.

## Soil Survey of Paulding County, Georgia

A—0 to 4 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; common very fine and fine and few medium and coarse roots; strongly acid; clear smooth boundary.

Bw—4 to 12 inches; dark yellowish brown (10YR 4/4) loamy sand; weak fine subangular blocky structure; friable; few very fine to medium roots; moderately acid; abrupt wavy boundary.

R—12 to 16 inches; hard granite.

### **Range in Characteristics**

*Thickness of the solum:* 11 to 20 inches

*Depth to hard bedrock:* 11 to 20 inches

*Content of flakes of mica (where present):* Few or common throughout

*Rock fragments:* 0 to 35 percent, by volume

*Reaction:* Very strongly acid to moderately acid throughout, except where lime has been applied

*A horizon:*

Color—7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4

Texture—loamy sand, loamy coarse sand, or sand

*Bw horizon:*

Color—7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 6

Texture—loamy sand, loamy coarse sand, or sand

*C horizon (where present):*

Color—7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8

Texture—loamy sand, loamy coarse sand, or sand

*Cr horizon (where present):*

Type of bedrock—multicolored, weathered granite or gneiss

*R layer:*

Type of bedrock—unweathered bedrock, such as granite or gneiss

## **Wateree Series**

*Landform:* Hills

*Parent material:* Residuum weathered from granite and gneiss

*Drainage class:* Well drained

*Permeability class:* Moderately rapid

*Depth class:* Moderately deep

*Slope:* 2 to 60 percent

*Taxonomic classification:* Coarse-loamy, mixed, semiactive, thermic Typic Dystrudepts

### **Geographically Associated Soils**

- Crawfordville soils, which are fine
- Helena soils, which are fine, very deep, and moderately well drained
- Rion soils, which are fine-loamy and very deep
- Sedgefield soils, which are fine and very deep
- Wake soils, which are shallow to bedrock

### **Typical Pedon**

Wateree sandy loam in an area of Wateree-Helena complex, 6 to 10 percent slopes; Paulding County, Georgia; Paulding Meadows Drive to Paulding Meadows Park, right 0.2 mile after the park entrance, 0.4 mile past a parking lot in a turn-around area, 0.3 mile to an old cleared area, and in the east corner in a cut wall; Dallas, Georgia,

## Soil Survey of Paulding County, Georgia

USGS 7.5-minute quadrangle; lat. 33 degrees 57 minutes 12 seconds N. and long. 84 degrees 51 minutes 22 seconds W.

A—0 to 7 inches; olive brown (2.5Y 4/3) sandy loam; weak fine granular structure; friable; common very fine and fine and few coarse roots; moderately acid; clear smooth boundary.

Bw—7 to 27 inches; brownish yellow (10YR 6/6) sandy loam; weak fine subangular blocky structure; friable; few fine and medium roots; strongly acid; clear smooth boundary.

C—27 to 30 inches; 50 percent brownish yellow (10YR 6/6) and 50 percent olive yellow (2.5Y 6/6) loamy sand; massive; firm; few fine roots; strongly acid; clear smooth boundary.

Cr—30 to 45 inches; weathered granite gneiss.

### **Range in Characteristics**

*Thickness of the solum:* 14 to 30 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* 40 to more than 60 inches

*Rock fragments:* 0 to 35 percent throughout

*Reaction:* Very strongly acid to moderately acid in the A and B horizons and extremely acid to moderately acid in the C and Cr horizons

#### *A horizon:*

Color—dominantly hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4; value of 3 in some pedons where the horizon is less than 6 inches thick

Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

#### *E horizon (where present):*

Color—hue of 10YR, value of 4 to 7, and chroma of 3 or 4

Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

#### *Bw horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8

Texture (fine-earth fraction)—coarse sandy loam, sandy loam, or fine sandy loam; thin layers of loamy sandy or sandy clay loam in some pedons

Mottles (where present)—few or common in shades of brown or yellow

#### *C horizon:*

Color—hue of 5YR to 2.5Y, value of 5 or 6, chroma of 6 to 8

Texture (fine-earth fraction)—sand, fine sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, or fine sandy loam

#### *Cr horizon:*

Type of bedrock—weathered granite or gneiss

## **Waynesboro Series**

*Landform:* Hills and terraces

*Parent material:* Unconsolidated sediments derived from limestone, sandstone, and shale

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 6 to 30 percent

*Taxonomic classification:* Fine, kaolinitic, thermic Typic Paleudults

### **Geographically Associated Soils**

- Allen soils, which are fine-loamy
- Aragon soils, which exhibit a decrease in content of clay within a depth of 60 inches

#### **Typical Pedon**

Waynesboro clay loam, 6 to 10 percent slopes, moderately eroded; Bartow County, Georgia; 2.2 miles southwest of Etowah River Bridge on Georgia Highway 113 to Brown Farm Road, 0.4 mile north on Brown Farm Road to a sharp curve west, and in a road cut on the north side of road; Burnt Hickory Ridge, Georgia, USGS 7.5-minute quadrangle; lat. 34 degrees 7 minutes 23 seconds N. and long. 84 degrees 51 minutes 60 seconds W.

Ap—0 to 6 inches; reddish brown (5YR 4/4) clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; 12 percent gravel; strongly acid; abrupt smooth boundary.

Bt1—6 to 13 inches; yellowish red (5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots; common faint clay films on faces of peds; 12 percent gravel; very strongly acid; clear wavy boundary.

Bt2—13 to 26 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable; few fine roots; many distinct clay films on faces of peds; 10 percent gravel; very strongly acid; clear wavy boundary.

Bt3—26 to 44 inches; red (2.5YR 4/6) clay; few medium prominent yellowish brown (10YR 5/4) mottles; moderate medium subangular blocky structure; firm; few fine roots; many prominent clay films on faces of peds; 5 percent gravel; very strongly acid; gradual wavy boundary.

Bt4—44 to 55 inches; red (2.5YR 4/6) clay; common medium prominent brownish yellow (10YR 6/6) mottles; moderate medium subangular blocky structure; firm; many prominent clay films on faces of peds; 5 percent gravel; very strongly acid; gradual wavy boundary.

Bt5—55 to 72 inches; red (2.5YR 4/6) clay; common coarse prominent pale yellow (2.5Y 8/3) and common coarse prominent brownish yellow (10YR 6/6) mottles; moderate medium subangular blocky structure parting to weak medium angular blocky; firm; many prominent clay films on faces of peds; 5 percent gravel; very strongly acid.

#### **Range in Characteristics**

*Thickness of the solum:* More than 60 inches

*Depth to bedrock:* More than 60 inches

*Rock fragments:* 0 to 25 percent chert or quartz gravel and sandstone cobbles in the A horizon and 0 to 15 percent chert or quartz gravel and sandstone cobbles in the other horizons

*Reaction:* Strongly acid or very strongly acid, except where lime has been applied

*A or Ap horizon:*

Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 3 to 8

Texture—sandy loam, fine sandy loam, loam, silt loam, or clay loam

*E horizon (where present):*

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

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

*Bt horizon:*

Color—dominantly hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8; hue of 7.5YR in the upper few inches in some pedons; hue of 2.5YR, value of 3, and chroma of 6 in the middle and lower parts of the horizon in some pedons

Texture—dominantly clay loam or clay; sandy clay or sandy clay loam in the upper few inches in some pedons

## Wehadkee Series

*Landform:* Flood plains

*Parent material:* Loamy alluvium

*Drainage class:* Poorly drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 0 to 2 percent

*Taxonomic classification:* Fine-loamy, mixed, active, nonacid, thermic Fluvaquentic Endoaquepts

### **Geographically Associated Soils**

- Cartecay soils, which are coarse-loamy and somewhat poorly drained
- Chewacla soils, which are somewhat poorly drained
- Toccoa soils, which are coarse-loamy and are well drained or moderately drained

### **Typical Pedon**

Wehadkee silt loam, in an area of Wehadkee-Cartecay complex, 0 to 2 percent slopes, occasionally flooded; Fulton County, Georgia, 1.0 mile east-northeast of Georgia Highway 29 and Union City, 1.0 mile northwest of I-85, and 50 feet east of power line right-of-way; Fairburn, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 35 minutes 31 seconds N. and long. 84 degrees 31 minutes 43 seconds W.

A—0 to 5 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; common very fine and fine roots; moderately acid; clear smooth boundary.

Bg1—5 to 15 inches; dark gray (10YR 4/1) silty clay loam; weak fine subangular blocky structure; friable; few very fine to medium roots; few fine prominent dark yellowish brown (10YR 4/6) masses of oxidized iron; moderately acid; clear smooth boundary.

Bg2—15 to 25 inches; gray (10YR 5/1) loam; weak fine subangular blocky structure; friable; few very fine roots; few fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; moderately acid; clear smooth boundary.

Cg1—25 to 38 inches; light gray (2.5Y 7/1) sandy loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; slightly acid; clear smooth boundary.

Cg2—38 to 56 inches; light gray (2.5Y 7/1) sandy clay loam; massive; friable; common fine prominent yellowish brown (10YR 5/6) masses of oxidized iron; neutral; pockets of sandy clay.

### **Range in Characteristics**

*Thickness of the solum:* 20 to more than 60 inches

*Reaction:* Very strongly acid to neutral; some part of the 10- to 40-inch control section is moderately acid to neutral

#### *A horizon:*

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4

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

#### *Bg horizon:*

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 2; or neutral in hue and value of 4 to 6

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

Redoximorphic features—soft masses of oxidized iron in shades of red, brown, and yellow

#### *Cg horizon:*

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 2; or neutral in hue and value of 4 to 7

Texture—sandy loam, loam, or silt loam; layers of sandy clay loam or clay loam in some pedons  
Redoximorphic features—soft masses of oxidized iron in shades of red, brown, and yellow

## Wickham Series

*Landform:* Stream terraces

*Parent material:* Old alluvium

*Drainage class:* Well drained

*Permeability class:* Moderate

*Depth class:* Very deep

*Slope:* 2 to 6 percent

*Taxonomic classification:* Fine-loamy, mixed, semiactive, thermic Typic Hapludults

### Geographically Associated Soils

- Altavista soils, which are moderately well drained

### Typical Pedon

Wickham sandy loam, 2 to 6 percent slopes; Fulton County, Georgia; 800 feet west of Cochran Road and 1,000 feet east of the mouth of Camp Creek and the Chattahoochee River; Campbellton, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 40 minutes 14 seconds N. and long. 84 degrees 38 minutes 55 seconds W.

Ap—0 to 7 inches; brown (7.5YR 4/3) sandy loam; weak fine granular structure; friable; common very fine to medium roots; 1 percent gravel; moderately acid; clear smooth boundary.

BE—7 to 12 inches; dark brown (7.5YR 3/4) sandy loam; weak fine subangular blocky structure; friable; common very fine and fine roots; few fine flakes of mica; slightly acid; clear smooth boundary.

Bt—12 to 54 inches; yellowish red (5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; few very fine and fine roots; common distinct clay films on faces of peds; slightly acid; clear smooth boundary.

BC1—54 to 62 inches; strong brown (7.5YR 4/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; few fine flakes of mica; moderately acid; clear smooth boundary.

BC2—62 to 80 inches; strong brown (7.5YR 4/6) sandy loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; few fine flakes of mica; moderately acid.

### Range in Characteristics

*Thickness of the solum:* 36 to more than 60 inches

*Reaction:* Very strongly acid to moderately acid, except where the surface layer has been limed

*Rock fragments:* Dominantly 0 to 5 percent gravel throughout; up to 15 percent in the surface layer in some pedons

*Content of flakes of mica (where present):* Few or common, along with other weatherable minerals, in the A, BE, and Bt horizons and few, common, or many in the BC and C horizons

*A or Ap horizon:*

Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 8

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

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### *E horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6

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

### *BE or (where present) BA horizon:*

Color—hue of 2.5YR to 7.5YR, value of 3 to 6, and chroma of 4 to 8

Texture—sandy loam, fine sandy loam, or loam

### *Bt horizon:*

Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8; at least one subhorizon has hue of 5YR or 2.5YR, typically in the upper part of the horizon

Texture—sandy clay loam, loam, sandy loam, or clay loam; thin layers of clay or sandy clay in some pedons

Mottles (where present)—few or common in shades red, brown, or yellow

### *BC horizon:*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8

Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Mottles (where present)—few or common in shades of red, brown, or yellow

### *C horizon (where present):*

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8

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

Mottles (where present)—few or common in shades of red, brown, or yellow

## **Wilkes Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss

*Drainage class:* Well drained

*Permeability class:* Moderately slow

*Depth class:* Shallow

*Slope:* 6 to 60 percent

*Taxonomic classification:* Loamy, mixed, active, thermic, shallow Typic Hapludalfs

### ***Geographically Associated Soils***

- Helena soils, which are very deep, moderately well drained, and on footslopes
- Poindexter soils, which are moderately deep, are fine loamy, and have 18 to 35 percent clay in the control section
- Rowan soils, which are very deep, are fine-loamy, and have 18 to 35 percent clay in the control section
- Wynott soils, which are moderately deep to weathered bedrock, are fine, and have more than 35 percent clay in the control section

### ***Typical Pedon***

Wilkes channery sandy loam in an area of Poindexter-Wilkes-Rowan complex, 15 to 25 percent slopes, stony; Paulding County, Georgia; High Shoals Road to Black Forest Drive in Black Forest Subdivision, Black Forest Drive to Black Cabin Way, left on Black Cabin Way to the end of paved road, 400 feet to the top of a ridge, and 350 feet northeast; Yorkville, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 59 minutes 19 seconds N. and long. 84 degrees 52 minutes 39 seconds W.

A—0 to 6 inches; brown (10YR 4/3) channery sandy loam; moderate fine granular structure; friable; many very fine and fine and few medium roots; 30 percent channers; strongly acid; clear smooth boundary.

Bt—6 to 14 inches; 60 percent strong brown (7.5YR 4/6) and 40 percent reddish brown (5YR 4/4) sandy clay loam; moderate fine subangular blocky structure; firm;

## Soil Survey of Paulding County, Georgia

common very fine and fine and few medium and coarse roots; few faint clay films on faces of peds; 2 percent cobbles and 5 percent gravel; moderately acid; clear wavy boundary.

Cr—14 to 48 inches; weathered hornblende gneiss.

### **Range in Characteristics**

*Thickness of the solum:* 10 to 20 inches

*Depth to soft bedrock:* 10 to 20 inches

*Depth to hard bedrock:* 40 to more than 60 inches

*Rock fragments:* 0 to 50 percent gravel, cobbles, or stones in the A horizon and 0 to 35 percent in the B horizon

*Reaction:* Strongly acid to slightly acid in the upper horizons and moderately acid to slightly alkaline in the lower horizon

*A or Ap horizon:*

Color—hue of 7.5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 6

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

*E horizon (where present):*

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 8

Texture (fine-earth fraction)—sandy loam, fine sandy loam, or loam

*Bt horizon:*

Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture (fine-earth fraction)—loam, sandy clay loam, clay loam, or clay

Mottles (where present)—few or common in shades of black, green, gray, or white

*BC or CB horizon (where present):*

Color—hue of 5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8

Texture—loam, sandy clay loam, clay loam, or clay

Mottles (where present)—few or common in shades of black, green, gray, or white

*C horizon (where present):*

Color—black, greenish, brownish, or grayish

Texture—loamy saprolite

*Cr horizon:*

Type of bedrock—soft, weathered, mafic crystalline rock

## **Wynott Series**

*Landform:* Hills

*Parent material:* Residuum weathered from hornblende gneiss

*Drainage class:* Well drained

*Permeability class:* Slow

*Depth class:* Moderately deep

*Slope:* 6 to 15 percent

*Taxonomic classification:* Fine, mixed, active, thermic Typic Hapludalfs

### **Geographically Associated Soils**

- Poindexter soils, which are fine-loamy
- Rowan soils, which are fine-loamy and very deep
- Wilkes soils, which are shallow to weathered bedrock

### **Typical Pedon**

Wynott sandy loam in an area of Poindexter-Wilkes-Wynott complex, 6 to 10 percent slopes, stony; Paulding County, Georgia; High Shoals Road to Black Forest Drive in

## Soil Survey of Paulding County, Georgia

Black Forest Subdivision, Black Forest Drive to Black Cabin Way, left on Black Cabin Way to the end of the paved road, 400 feet to the top of a ridge, 200 feet west on a trail, and on the left side of the trail; Yorkville, Georgia, USGS 7.5-minute quadrangle; lat. 33 degrees 59 minutes 16 seconds N. and long. 84 degrees 52 minutes 44 seconds W.

A—0 to 6 inches; brown (10YR 4/3) sandy loam; moderate fine granular structure; friable; common very fine and fine roots; 12 percent gravel; slightly acid; clear wavy boundary.

Bt1—6 to 12 inches; brown (7.5YR 4/4) clay loam; strong fine subangular blocky structure; firm; common very fine and few medium roots; common distinct clay films on faces of peds; 8 percent gravel; slightly acid; clear wavy boundary.

Bt2—12 to 20 inches; yellowish brown (10YR 5/6) clay; strong medium subangular blocky structure; very firm, very sticky, very plastic; few very fine to medium roots; many prominent clay films on faces of peds; common fine dark masses; 3 percent gravel; moderately acid; clear wavy boundary.

BC—20 to 26 inches; strong brown (7.5YR 5/6) clay loam; weak fine subangular blocky structure; firm; few very fine and fine roots; common distinct clay films on faces of peds; 10 percent gravel; slightly acid; clear wavy boundary.

C—26 to 32 inches; 50 percent dark yellowish brown (10YR 4/4), 25 percent strong brown (7.5YR 5/8), and 25 percent light gray (2.5Y 7/2) sandy clay loam; massive; firm; few very fine and fine roots; 5 percent gravel; slightly acid; clear wavy boundary.

Cr—32 to 36 inches; weathered hornblende gneiss.

### **Range in Characteristics**

*Thickness of the solum:* 20 to 40 inches

*Depth to soft bedrock:* 20 to 40 inches

*Depth to hard bedrock:* 40 to more than 60 inches

*Rock fragments:* 0 to 35 percent gravel, 0 to 25 percent cobbles, and 0 to 25 percent stones in the A horizon; 0 to 10 percent gravel and 0 to 3 percent cobbles in the B and BC horizons

*Reaction:* Very strongly acid to slightly acid

*A or Ap horizon:*

Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8

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

*EB or BE horizon (where present):*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

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

*Bt horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

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

Mottles—shades of yellow or brown

*BC horizon:*

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—clay loam, sandy clay loam, or sandy clay

Mottles—shades of brown, yellow, black, or white

*C horizon:*

Color—multicolored in shades of brown, yellow, black, or white

Texture—sandy loam, loam, or silt loam, variable textures

*Cr horizon:*

Type of bedrock—weathered hornblende or amphibolite

# Formation of the Soils

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This section describes the factors of soil formation and relates them to the soils in the survey area.

## Factors of Soil Formation

Soil characteristics are determined by the physical and mineralogical composition of the parent material; the plants and animals living on and in the soil; the climate under which the parent material accumulated and has existed since accumulation; the relief, or lay of the land; and the length of time that the forces of soil formation have acted on the soil material. All of these factors influence every soil, but the significance of each factor varies from place to place. In one area, one factor may dominate soil formation; in another area, a different factor may dominate.

The interrelationships among these five factors are complex, and the effects of any one factor cannot be isolated and completely evaluated. It is convenient, however, to describe each factor separately and to indicate the probable effects of each.

## Parent Material

Parent material is the unconsolidated mass in which a soil forms. The chemical and mineralogical composition of the soil is derived largely from the parent material. The soils in Paulding County formed mainly from materials weathered from crystalline rock, such as biotite gneiss, phyllite, granitic gneiss, hornblende gneiss, amphibolite, porphyroblastic granite, and muscovite and mica schist (Crawford and Hurst, 1969).

Pacolet and Madison soils are examples of soils that have a red subsoil and formed in parent material weathered mainly from granite gneiss or biotite gneiss. Grover soils have a high content of mica and formed in parent material weathered mainly from mica schist. Lloyd soils have a dark surface layer and subsoil and formed in parent material weathered mainly from amphibolites and hornblende gneiss or intermediate gneiss. Wynott, Crawfordville, and Sedgefield soils are examples of soils that have a firm, sticky, and plastic subsoil and formed in parent material that weathered mainly from basic hornfels. Stream alluvium is adjacent to all the streams in the survey area. It includes sandy, loamy, and clayey sediments transported from the uplands. Cartecay, Chewacla, and Wehadkee soils formed in stream alluvium.

## Plants and Animals

The effects of plants, animals, and other organisms on soil formation are significant. Plants and animals increase the content of organic matter and nitrogen, increase or decrease the content of plant nutrients, and change soil structure and porosity.

Plants recycle nutrients, add organic matter to the soil, and provide food and cover for animals. They stabilize the surface layer so that the soil-forming processes can continue. They also provide a more stable environment for the soil-forming processes by protecting the soils from extremes in temperature. The soils in the survey area formed under a succession of briers, brambles, and woody plants that were dominated

by pines and hardwoods. Hardwoods eventually suppressed most other plants and became the predominant type of plant in the climax plant community.

Animals rearrange soil material by making the surface rough, by forming and filling channels, and by shaping the peds and voids. The soil is mixed by ants, wasps, worms, and spiders, which make channels; by crustaceans, such as crayfish; and by turtles and foxes, which dig burrows. Humans affect the soil-forming processes by tilling, removing natural vegetation, establishing different plants, and reducing or increasing the level of fertility. Bacteria, fungi, and other microorganisms hasten the decomposition of organic matter and increase the rate at which nutrients are released for plant growth.

The net gains and losses caused by plants and animals are important in the survey area. Within the relatively small confines of the survey area, however, one soil is not significantly different from another because of the effects of plants and animals.

## **Climate**

The present climate of Paulding County is probably similar to the climate that existed when the soils formed. The relatively high amount of rainfall and the warm temperatures contribute to rapid soil formation. Rainfall and temperature are the two most important climatic features that relate to soil properties.

Water from precipitation is essential in the formation of soil. Water dissolves soluble materials and is used by plants and animals. It transports material from one part of the soil to another part and from one area of the landscape to another area.

The soils in Paulding County formed under a thermic temperature regime. In a thermic temperature regime, the mean soil temperature at a depth of 20 inches is 59 to 72 degrees Fahrenheit. Based on the mean annual air temperature, the estimated soil temperature in the survey area is 61 degrees Fahrenheit. The rates of chemical reactions and other processes in the soil depend to some extent on temperature. In addition, temperature affects the type and quality of vegetation, the amount and kind of organic matter, and the rate at which the organic matter decomposes.

## **Relief**

Relief is the elevations or inequalities of a land surface considered collectively. The color of the soil, the degree of wetness, the thickness of the A horizon, the content of organic matter, and the plant cover are commonly related to relief.

In Paulding County, the most obvious effects of relief are those that relate to soil color and degree of soil wetness. Most Pacolet soils have a reddish subsoil, whereas Chewacla soils have a grayish brown subsoil. The difference in color results from a difference in relief and a corresponding difference in internal drainage. Because Pacolet soils are in the higher positions on the landscape and are better drained than Chewacla soils, Pacolet soils are better oxidized and have a reddish subsoil.

The movement of water across the surface and through the soil is controlled mostly by relief. Water flowing across the surface commonly carries solid particles and causes erosion or deposition, depending on the kind of relief. In the sloping areas, the soils are drier because more water runs off and less water penetrates the surface. The soils in low-lying areas are commonly wetter because they receive the water that flows off and through the soils in the higher positions of the landscape.

## **Time**

The length of time that the soil-forming processes have acted on the parent material helps to determine the characteristics of the soil. Determinations of when soil formation began in the survey area are not exact. Most of the soils, however, are considered mature.

Mature soils are in equilibrium with the environment. They are characterized by pedogenic horizons that are readily recognizable and a carbon content that decreases regularly as the depth increases. Some areas of the Pacolet soils are on stable landscapes where the soil-forming processes have been active for thousands of years. These mature soils have a solum that is highly weathered and a zone of illuviation that is well expressed.

Erosion has removed most of the zone of eluviation in some places. Cartecay soils are young soils. They receive sediment annually from floodwater. They are stratified and are not old enough to have a zone of illuviation. They do not have pedogenic horizons and are characterized by a carbon content that decreases irregularly as the depth increases.

## Processes of Horizon Differentiation

One or more soil-forming processes are involved in the formation of soil horizons. These processes are the accumulation of organic matter; the chemical weathering, mainly by hydrolysis, of primary minerals into silicate clay minerals; the translocation of silicate clay and some silt-sized particles from one horizon to another; and the reduction and transfer of iron.

These processes have been active in the formation of most of the soils in Paulding County. The interaction of the first four processes is indicated by the strongly expressed horizons in Pacolet and Madison soils. All five processes have probably been active in the formation of the moderately well drained Helena and Hard Labor soils.

Some organic matter has accumulated in all of the soils in the survey area. Most of the soils contain moderately low amounts of organic matter in the surface layer. The content of organic matter in the surface layer ranges from low, as in Toccoa soils, to high, as in Wehadkee soils.

The translocation of clay minerals is an important process in the development of many soils in the survey area. As clay minerals are removed from the A horizon, they accumulate as clay films on the faces of peds, in pores, and in root channels in the B horizon.

As silicate clay forms from primary minerals, some iron is commonly released as hydrated oxides. These oxides are generally red. Even in small amounts, they give the soil material a brownish color. They are largely responsible for the strong brown, yellowish brown, and reddish brown colors that are dominant in the subsoil of many soils in the survey area.

The reduction and transfer of iron has occurred in all of the soils that are not characterized by good natural drainage. This process, known as gleying, is evidenced by a gray matrix color and by iron or clay depletions. Some of the iron may be reoxidized and segregated and thus form yellow, brown, red, or other brightly colored masses of iron accumulation in an essentially gray matrix in the subsoil. Nodules or concretions of iron ore or manganese also commonly form as a result of this process. Soil features associated with chemically reduced iron are referred to as redoximorphic features (Vepraskas, 1992).

## Geology

Mark E. Hall, geologist, Natural Resources Conservation Service, helped prepare this section.

Paulding County falls within two physiographic provinces. The northwestern corner of the county is in the Great Valley District, Southern Valley and Ridge Section of the Ridge and Valley Province, which is composed of sedimentary rocks. The rest of the county falls within the Cherokee Upland District, Hightower-Jasper Ridges District, and Central Uplands District, Southern Piedmont Section of the Piedmont Province (Clark and Zisa, 1976).

## Soil Survey of Paulding County, Georgia

The Piedmont Province is composed of metamorphic rocks. The terrain of the Great Valley District is typically broad and open and has a few scattered ridges. The eastern boundary of the Great Valley District follows the escarpment of the Cartersville fault. In Paulding County, this district is underlain by Ordovician (445 to 488 million years old) limestone and slate. The Cherokee Upland District is hilly and has elevations reaching about 1,000 feet in the southern area. Streams flow in open valleys to the southwest, 200 to 300 feet below the adjacent ridges. The Hightower-Jasper Ridges District is a series of low, parallel ridges separated by narrow valleys. The portion of the Central Uplands District within Paulding County has elevations approaching 1,100 feet. Clarke and Zisa (1976) describe the streams in this district as forming a rectangular pattern and lying 100 to 150 feet below the surrounding area.

The geology of Paulding County is complex, consisting of unmetamorphosed sedimentary rocks and metamorphosed plutonic, volcanic, and sedimentary rocks. These lithologies have experienced multiple periods of deformation and faulting.

The southeastern three-quarters of the county is underlain by gneisses and plutonic rocks. These are granitic gneiss, granitic hornblende biotite gneiss, amphibolite gneiss, migmatite, biotite granite/biotite gneiss, gabbro, and a porphyroblastic granite (Crawford and Hurst, 1969). A few small bodies of ultramafic rock are also in this area, typically forming small hills. The gneisses are across the entire area up to the Cartersville fault. The granitic gneiss and granitic hornblende biotite gneiss are primarily in the south. Soils over these two lithologies include dark red soils, such as Lloyd, Agricola, and Musella soils, and brown soils, such as Appling, Hard Labor, and Rion soils.

The biotite granite/biotite gneiss dominates the northern portion of the county. Common soils in this area are Madison, Grover, Mountain Park, Rion, and Pacolet soils. The porphyroblastic granite borders the gneiss assemblage to the west. Wateree, Wake, and Rion soils formed in this parent material.

The remaining, northwestern portion of the county up to the Cartersville fault is underlain by muscovite, sericite, schists, and phyllites interlayered with metagraywacke. Pyrophyllite is in the northwestern corner of the county, and a narrow band of garnet muscovite schist trends east-west in the southwestern corner. These phyllites and schists are overlain by Braswell, Fruithurst, and Tallapoosa soils.

Quaternary sediments in the flood plains of the Piedmont Province of Paulding County are sandy loam and silt loam, and the flood plain soils are Toccoa, Cartecay, Chewacla, and Wehadkee soils. The Newala limestone and Rockmart slate lie in the northwestern most corner of the county, northwest of the Cartersville fault. The soils in this area include Allen, Waynesboro, and Aragon soils, which are influenced by limestone, sandstone, and shale. Pettyjon loam is in all flood plains of this district.

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# Glossary

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Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

**Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

**Alluvium.** Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

**Animal unit month (AUM).** The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

**Aquic conditions.** Current soil wetness characterized by saturation, reduction, and redoximorphic features.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction toward which a slope faces. Also called slope aspect.

**Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low .....	0 to 3
Low .....	3 to 6
Moderate.....	6 to 9
High .....	9 to 12
Very high.....	more than 12

**Backslope.** The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

**Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

**Bottom land.** An informal term loosely applied to various portions of a flood plain.

**Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.

**Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

**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 material.** Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions.** See Redoximorphic features.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Claypan.** A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.
- Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
- COLE (coefficient of linear extensibility).** See Linear extensibility.
- Colluvium.** Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.
- Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
- Concretions.** See Redoximorphic features.
- Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."
- Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.
- Corrosion (geomorphology).** A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.
- Corrosion (soil survey interpretations).** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
- Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
- Cropping system.** Growing crops according to a planned system of rotation and management practices.
- Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the

stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

**Dense layer** (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Drainage class** (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained*. These classes are defined in the “Soil Survey Manual.”

**Drainage, surface.** Runoff, or surface flow of water, from an area.

**Ecosystem services.** The benefits that individuals, communities, and economies derive from the environment. Examples include clean water, healthy soils, nutrient cycling, and pollination.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

*Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains.  
Synonym: natural erosion.

*Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion.  
Synonym: scarp.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity, or capillary capacity*.

**Fill slope.** A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Flood plain.** The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

**Fluvial.** Of or pertaining to rivers or streams; produced by stream or river action.

**Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

**Forb.** Any herbaceous plant not a grass or a sedge.

**Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.

**Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

**Fragipan.** A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

**Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

**Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

**Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

**Ground water.** Water filling all the unblocked pores of the material below the water table.

**Gully.** A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

**Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

**Hardpan.** A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

**Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

**Hillslope.** A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

**Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

*O horizon.*—An organic layer of fresh and decaying plant residue.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The

B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon*.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon*.—Soft, consolidated bedrock beneath the soil.

*R layer*.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Igneous rock.** Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

**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, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Iron depletions.** See Redoximorphic features.

**Irrigation.** Application of water to soils to assist in production of crops.

**Ksat.** See Saturated hydraulic conductivity.

**Landslide.** A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

**Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

**Linear extensibility.** Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

- Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.
- Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.
- Low strength.** The soil is not strong enough to support loads.
- Mass movement.** A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.
- Masses.** See Redoximorphic features.
- Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.
- Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.
- Metamorphic rock.** Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.
- Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.
- Miscellaneous area.** A kind of map unit that has little or no natural soil and supports little or no vegetation.
- Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.
- Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.
- Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.
- Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).
- Mountain.** A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.
- Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.
- Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)
- Nodules.** See Redoximorphic features.
- Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.
- Organic matter.** Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low .....	less than 0.5 percent
Low .....	0.5 to 1.0 percent
Moderately low.....	1.0 to 2.0 percent
Moderate.....	2.0 to 4.0 percent
High .....	4.0 to 8.0 percent
Very high.....	more than 8.0 percent

**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 movement of water through the soil.

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Pore linings.** See Redoximorphic features.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid.....	less than 3.5
Extremely acid .....	3.5 to 4.4
Very strongly acid .....	4.5 to 5.0
Strongly acid .....	5.1 to 5.5
Moderately acid .....	5.6 to 6.0
Slightly acid.....	6.1 to 6.5
Neutral .....	6.6 to 7.3
Slightly alkaline .....	7.4 to 7.8
Moderately alkaline.....	7.9 to 8.4
Strongly alkaline .....	8.5 to 9.0
Very strongly alkaline.....	9.1 and higher

**Redoximorphic concentrations.** See Redoximorphic features.

**Redoximorphic depletions.** See Redoximorphic features.

**Redoximorphic features.** Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions

may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
  - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
  - B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
  - C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
  - A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
  - B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletons).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

**Reduced matrix.** See Redoximorphic features.

**Relief.** The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

**Rill.** A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

**Riser.** The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

**Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

**Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called 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.

**Sandstone.** Sedimentary rock containing dominantly sand-sized particles.

**Saturated hydraulic conductivity (Ksat).** The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are *very high*, 100 or more micrometers per second (14.17 or more inches per hour); *high*, 10 to 100 micrometers per second (1.417 to 14.17 inches per hour); *moderately high*, 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour); *moderately low*, 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour); *low*, 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour); and *very low*, less than 0.01 micrometer per second (less than 0.001417 inch per hour). To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

**Sedimentary rock.** A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

**Series, soil.** A group of soils that have profiles that are almost alike. All the soils of a given series have horizons that are similar in composition, thickness, and arrangement.

**Shale.** Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

**Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

**Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

**Shrink-swell (in tables).** The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Side slope (geomorphology).** A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

**Silica.** A combination of silicon and oxygen. The mineral form is called quartz.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

**Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

**Slickensides (pedogenic).** Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level.....	0 to 2 percent
Gently sloping.....	2 to 6 percent
Sloping.....	6 to 10 percent
Strongly sloping.....	10 to 15 percent
Moderately steep.....	15 to 25 percent
Steep.....	25 to 45 percent
Very steep.....	45 to 60 percent

**Slope alluvium.** Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished pedis and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

**Slow water movement** (in tables). Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand.....	2.0 to 1.0
Coarse sand.....	1.0 to 0.5
Medium sand.....	0.5 to 0.25
Fine sand.....	0.25 to 0.10
Very fine sand.....	0.10 to 0.05
Silt.....	0.05 to 0.002
Clay.....	less than 0.002

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Stone line.** In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

**Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.

**Stream terrace.** One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Subsoiling.** Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

**Substratum.** The part of the soil below the solum.

**Subsurface layer.** Any surface soil horizon (A, E, AB, or EB) below the surface layer.

**Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

**Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

**Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

**Terrace (conservation).** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

**Terrace (geomorphology).** A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

**Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

**Thin layer (in tables).** Otherwise suitable soil material that is too thin for the specified use.

**Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

**Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

**Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

**Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

**Tread.** The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

**Upland.** An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

**Variation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

## Soil Survey of Paulding County, Georgia

**Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

**Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

**Wilting point (or permanent wilting point).** The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

**Windthrow.** The uprooting and tipping over of trees by the wind.

# Tables

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# Soil Survey of Paulding County, Georgia

Table 1.--Temperature and Precipitation

[Recorded in the period 1971-2000 at Dallas, Georgia]

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch	Average snowfall
				Max. temp. higher than--	Min. temp. lower than--			Less than--	More than--		
				°F	°F			°F	°F		
January----	50.2	28.7	39.4	72	3	25	5.82	3.80	7.91	8	1.3
February----	55.4	31.1	43.2	77	9	45	5.08	3.11	7.08	6	0.7
March-----	63.7	38.3	51.0	83	17	134	5.94	3.52	7.98	8	1.0
April-----	72.3	45.0	58.6	89	26	284	4.50	2.10	6.75	6	0.1
May-----	79.2	53.9	66.6	91	37	514	4.32	2.36	6.07	6	0.0
June-----	85.8	62.1	74.0	96	46	719	4.25	2.39	6.13	7	0.0
July-----	89.3	66.5	77.9	100	56	864	4.59	2.42	6.62	6	0.0
August-----	88.1	65.4	76.7	98	55	828	4.40	2.58	6.17	6	0.0
September--	82.6	58.9	70.7	95	40	619	3.60	1.70	5.33	5	0.0
October----	73.0	46.5	59.7	87	29	312	3.38	1.42	5.24	4	0.0
November---	63.0	38.5	50.7	81	20	126	4.21	2.67	5.58	6	0.1
December---	53.4	31.3	42.3	74	9	42	4.23	2.18	6.18	7	0.3
Yearly:											
Average--	71.3	47.2	59.2	---	---	---	---	---	---	---	---
Extreme--	104	-12	---	101	1	---	---	---	---	---	---
Total----	---	---	---	---	---	4,513	54.32	46.42	61.84	75	3.6

\* 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).

## Soil Survey of Paulding County, Georgia

Table 2.--Freeze Dates in Spring and Fall

[Recorded in the period 1971-2000 at Dallas, Georgia]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
<b>Last freezing temperature in spring:</b>			
1 year in 10 later than--	Mar. 31	Apr. 12	Apr. 24
2 years in 10 later than--	Mar. 23	Apr. 7	Apr. 19
5 years in 10 later than--	Mar. 9	Mar. 28	Apr. 11
<b>First freezing temperature in fall:</b>			
1 year in 10 earlier than--	Nov. 8	Oct. 20	Oct. 9
2 years in 10 earlier than--	Nov. 14	Oct. 26	Oct. 14
5 years in 10 earlier than--	Nov. 24	Nov. 7	Oct. 24

Table 3.--Growing Season

[Recorded in the period 1971-2000 at Dallas,  
Georgia]

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<i>Days</i>	<i>Days</i>	<i>Days</i>
9 years in 10	239	200	178
8 years in 10	246	208	184
5 years in 10	260	224	195
2 years in 10	274	239	207
1 year in 10	281	247	213

# Soil Survey of Paulding County, Georgia

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AaE2	Agricola-Lloyd-Musella complex, 15 to 25 percent slopes, moderately eroded-----	6,075	3.0
AcF2	Agricola-Lloyd-Musella complex, 25 to 45 percent slopes, stony, moderately eroded-----	1,555	0.8
AeB	Allen loam, 2 to 6 percent slopes-----	40	*
AeC	Allen loam, 6 to 10 percent slopes-----	30	*
AeD	Allen loam, 10 to 15 percent slopes-----	30	*
AeE	Allen loam, 15 to 30 percent slopes-----	30	*
AnB	Altavista sandy loam, 2 to 6 percent slopes-----	1,340	0.7
ApB	Appling-Hard Labor complex, 2 to 6 percent slopes-----	2,155	1.1
ApC	Appling-Hard Labor complex, 6 to 10 percent slopes-----	3,925	2.0
ArB	Aragon sandy loam, 2 to 6 percent slopes-----	5	*
ArC	Aragon sandy loam, 6 to 10 percent slopes-----	5	*
BrB	Braswell sandy loam, 2 to 6 percent slopes-----	1,805	0.9
BrC	Braswell sandy loam, 6 to 10 percent slopes-----	3,205	1.6
BrD	Braswell sandy loam, 10 to 15 percent slopes-----	3,980	2.0
CaA	Cartecay sandy loam, 0 to 3 percent slopes, occasionally flooded-----	10,725	5.4
CfA	Cedarbluff loam, 0 to 2 percent slopes, occasionally flooded-----	15	*
ChA	Chewacla loam, 0 to 2 percent slopes, occasionally flooded-----	1,535	0.8
CrD	Crawfordville-Wateree complex, 6 to 15 percent slopes-----	675	0.3
DAM	Dam-----	30	*
FrD	Fruithurst-Braswell complex, 6 to 15 percent slopes-----	10,030	5.0
FrE	Fruithurst-Braswell complex, 15 to 25 percent slopes-----	10,600	5.3
FtE	Fruithurst-Tallapoosa complex, 15 to 25 percent slopes-----	440	0.2
GrC	Grover-Mountain Park complex, 6 to 10 percent slopes-----	3,285	1.6
GrD	Grover-Mountain Park complex, 10 to 15 percent slopes-----	2,765	1.4
GrE	Grover-Mountain Park complex, 15 to 25 percent slopes-----	9,355	4.7
GrF	Grover-Mountain Park complex, 25 to 45 percent slopes-----	1,860	0.9
HaB	Helena sandy loam, 2 to 6 percent slopes-----	55	*
LdB2	Lloyd-Agricola-Musella complex, 2 to 6 percent slopes, moderately eroded-----	1,960	1.0
LdC2	Lloyd-Agricola-Musella complex, 6 to 10 percent slopes, moderately eroded-----	7,065	3.5
LdD2	Lloyd-Agricola-Musella complex, 10 to 15 percent slopes, moderately eroded-----	8,995	4.5
MaC2	Madison sandy loam, 6 to 10 percent slopes, moderately eroded-----	2,335	1.2
PaB2	Pacolet sandy loam, 2 to 6 percent slopes, moderately eroded-----	2,710	1.4
PaC2	Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded-----	7,510	3.8
PaD2	Pacolet sandy loam, 10 to 15 percent slopes, moderately eroded-----	7,560	3.8
PeA	Pettyjon loam, 0 to 2 percent slopes, occasionally flooded-----	35	*
Pg	Pits, quarry-----	230	0.1
PoF	Poindexter-Wilkes complex, 25 to 60 percent slopes, stony-----	2,340	1.2
PrE	Poindexter-Wilkes-Rowan complex, 15 to 25 percent slopes, stony-----	7,890	3.9
PwC	Poindexter-Wilkes-Wynott complex, 6 to 10 percent slopes, stony-----	4,725	2.4
PwD	Poindexter-Wilkes-Wynott complex, 10 to 15 percent slopes, stony-----	4,625	2.3
RnC	Rion sandy loam, 6 to 10 percent slopes-----	7,340	3.7
RnD	Rion sandy loam, 10 to 15 percent slopes-----	11,635	5.8
RnE	Rion sandy loam, 15 to 25 percent slopes-----	7,275	3.6
RwF	Rock outcrop-Wake-Wateree complex, 6 to 60 percent slopes-----	120	*
SeC	Sedgefield-Wateree complex, 2 to 10 percent slopes-----	470	0.2
ShA	Shady loam, 0 to 2 percent slopes, occasionally flooded-----	5	*
ShB	Shady loam, 2 to 6 percent slopes-----	15	*
SpF	Sipsey-Sunlight complex, 30 to 45 percent slopes-----	5	*
StA	Steadman silt loam, 0 to 2 percent slopes, occasionally flooded-----	30	*
TaF	Tallapoosa-Fruithurst complex, 25 to 60 percent slopes-----	15,190	7.6
ToA	Toccoa sandy loam, 0 to 3 percent slopes, occasionally flooded-----	3,820	1.9
UaE	Udorthents, 10 to 25 percent slopes-----	1,050	0.5
Ub	Urban land-----	3,915	2.0
W	Water-----	1,660	0.8
WaC	Wateree-Helena complex, 6 to 10 percent slopes-----	105	*
WaD	Wateree-Helena complex, 10 to 15 percent slopes-----	125	*
WeD	Wateree-Rion complex, 6 to 15 percent slopes, bouldery-----	490	0.2
WeE	Wateree-Rion complex, 15 to 25 percent slopes, bouldery-----	800	0.4

\* See footnote at end of table.

# Soil Survey of Paulding County, Georgia

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
WnC	Wateree-Rion complex, 6 to 10 percent slopes-----	1,555	0.8
WnD	Wateree-Rion complex, 10 to 15 percent slopes-----	2,005	1.0
WnE	Wateree-Rion complex, 15 to 25 percent slopes-----	4,205	2.1
WrC	Wateree-Wake complex, 6 to 10 percent slopes-----	780	0.4
WrD	Wateree-Wake complex, 10 to 15 percent slopes-----	320	0.2
WrE	Wateree-Wake complex, 15 to 25 percent slopes-----	1,425	0.7
WrF	Wateree-Wake complex, 25 to 45 percent slopes, bouldery-----	515	0.3
WsC	Waynesboro clay loam, 6 to 10 percent slopes, moderately eroded-----	5	*
WsD	Waynesboro clay loam, 10 to 15 percent slopes, moderately eroded-----	35	*
WsE	Waynesboro clay loam, 15 to 30 percent slopes, moderately eroded-----	5	*
WtA	Wehadkee silt loam, 0 to 2 percent slopes, occasionally flooded-----	1,440	0.7
WyB	Wickham sandy loam, 2 to 6 percent slopes-----	230	0.1
	Total-----	200,100	100.0

\* Less than 0.1 percent.

## Soil Survey of Paulding County, Georgia

Table 5.--Land Capability Classification and Yields per Acre of Crops and Pasture

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Pasture
		Bu	Tons	AUM
<b>AaE2:</b>				
Agricola-----	6e	---	2.5	4.0
Lloyd-----	6e	---	3.0	5.5
Musella-----	7e	---	2.0	3.5
<b>AcF2:</b>				
Agricola-----	7e	---	---	---
Lloyd-----	7e	---	---	---
Musella-----	7e	---	---	---
<b>AeB:</b>				
Allen-----	2e	90	4.0	7.0
<b>AeC:</b>				
Allen-----	3e	80	3.5	6.5
<b>AeD:</b>				
Allen-----	4e	75	3.0	5.5
<b>AeE:</b>				
Allen-----	6e	---	3.0	4.5
<b>AnB:</b>				
Altavista-----	2e	115	5.5	11.5
<b>ApB:</b>				
Appling-----	2e	90	4.80	8.0
Hard Labor-----	2e	90	4.80	8.0
<b>ApC:</b>				
Appling-----	3e	80	4.5	7.5
Hard Labor-----	3e	80	4.5	7.0
<b>ArB:</b>				
Aragon-----	2e	90	4.0	6.5
<b>ArC:</b>				
Aragon-----	3e	80	3.5	6.0
<b>BrB:</b>				
Braswell-----	2e	90	4.5	7.0
<b>BrC:</b>				
Braswell-----	3e	80	4.0	6.5
<b>BrD:</b>				
Braswell-----	4e	70	3.0	5.5
<b>CaA:</b>				
Cartecay-----	3w	75	5.0	10.0

Soil Survey of Paulding County, Georgia

Table 5.--Land Capability Classification and Yields per Acre of Crops and Pasture  
--Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Pasture
		Bu	Tons	AUM
CfA: Cedarbluff-----	3w	50	3.5	6.0
ChA: Chewacla-----	3w	80	6.0	11.0
CrD: Crawfordville-----	4e	70	4.80	7.0
Wateree-----	6e	---	4.5	3.0
DAM: Dam.				
FrD: Fruithurst-----	4e	60	3.0	5.0
Braswell-----	4e	65	3.5	5.5
FrE: Fruithurst-----	6e	---	2.5	2.0
Braswell-----	6e	---	2.5	2.0
FtE: Fruithurst-----	6e	---	---	2.0
Tallapoosa-----	7e	---	---	1.5
GrC: Grover-----	3e	80	4.0	6.5
Mountain Park-----	3e	70	3.5	5.0
GrD: Grover-----	4e	70	3.5	6.0
Mountain Park-----	4e	60	3.0	4.5
GrE: Grover-----	6e	---	2.5	4.5
Mountain Park-----	6e	---	2.0	3.5
GrF: Grover-----	7e	---	---	---
Mountain Park-----	7e	---	---	---
HaB: Helena-----	2e	80	4.0	6.0
LdB2: Lloyd-----	3e	90	4.5	8.5
Agricola-----	3e	70	4.0	6.0
Musella-----	4e	50	3.5	3.0

Soil Survey of Paulding County, Georgia

Table 5.--Land Capability Classification and Yields per Acre of Crops and Pasture  
--Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Pasture
		Bu	Tons	AUM
LdC2:				
Lloyd-----	4e	85	4.0	8.0
Agricola-----	4e	65	3.0	5.5
Musella-----	6e	---	3.0	2.5
LdD2:				
Lloyd-----	6e	---	3.5	6.0
Agricola-----	6e	---	3.0	5.0
Musella-----	6e	---	2.5	4.0
MaC2:				
Madison-----	3e	80	4.0	6.5
PaB2:				
Pacolet-----	3e	85	4.5	6.5
PaC2:				
Pacolet-----	4e	70	4.0	5.5
PaD2:				
Pacolet-----	6e	---	3.0	4.5
PeA:				
Pettyjon-----	2w	110	5.5	7.0
Eg:				
Pits, quarry.				
PoF:				
Poindexter-----	7e	---	---	---
Wilkes-----	7s	---	---	---
PrE:				
Poindexter-----	6e	---	2.5	4.0
Wilkes-----	7s	---	2.10	3.5
Rowan-----	6e	---	3.0	5.0
PwC:				
Poindexter-----	3e	---	4.0	5.0
Wilkes-----	4s	---	3.0	4.5
Wynott-----	3e	---	4.5	5.5
PwD:				
Poindexter-----	4e	---	3.5	4.0
Wilkes-----	6s	---	2.5	3.5
Wynott-----	4e	---	3.5	4.0
RnC:				
Rion-----	3e	70	4.0	5.5

Soil Survey of Paulding County, Georgia

Table 5.--Land Capability Classification and Yields per Acre of Crops and Pasture  
--Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Pasture
		Bu	Tons	AUM
RnD: Rion-----	4e	65	3.5	5.0
RnE: Rion-----	6e	---	2.5	4.0
RwF: Rock outcrop-----	8s	---	---	---
Wake-----	7s	---	---	---
Wateree-----	7e	---	---	---
SeC: Sedgefield-----	3e	75	3.5	5.5
Wateree-----	4e	65	3.0	4.0
ShA: Shady-----	2w	120	4.5	7.5
ShB: Shady-----	2e	100	4.0	7.0
SpF: Sipsey-----	7e	---	---	---
Sunlight-----	7e	---	---	---
StA: Steadman-----	2w	100	5.5	7.5
TaF: Tallapoosa-----	7e	---	---	---
Fruithurst-----	7e	---	---	---
ToA: Toccoa-----	2w	90	4.0	6.5
UaE: Udorthents.				
Ub: Urban land.				
W: Water.				
WaC: Wateree-----	4e	65	3.0	4.0
Helena-----	3e	70	3.5	5.30
WaD: Wateree-----	6e	---	2.5	3.5
Helena-----	4e	65	3.0	4.0

Soil Survey of Paulding County, Georgia

Table 5.--Land Capability Classification and Yields per Acre of Crops and Pasture  
--Continued

Map symbol and soil name	Land capability	Corn	Grass-legume hay	Pasture
		Bu	Tons	AUM
WeD:				
Wateree-----	6e	---	---	3.5
Rion-----	4e	---	---	4.5
WeE:				
Wateree-----	7e	---	---	3.0
Rion-----	6e	---	---	4.0
WnC:				
Wateree-----	4e	65	3.5	4.0
Rion-----	3e	70	4.0	6.5
WnD:				
Wateree-----	6e	---	3.5	3.5
Rion-----	4e	65	3.5	6.0
WnE:				
Wateree-----	7e	---	3.0	3.0
Rion-----	6e	---	3.0	4.5
WrC:				
Wateree-----	4e	---	3.0	3.0
Wake-----	4s	---	2.5	2.5
WrD:				
Wateree-----	6e	---	3.0	2.5
Wake-----	6s	---	2.0	2.5
WrE:				
Wateree-----	7e	---	---	2.0
Wake-----	6s	---	---	2.0
WrF:				
Wateree-----	7e	---	---	---
Wake-----	7s	---	---	---
WsC:				
Waynesboro-----	3e	80	4.0	7.5
WsD:				
Waynesboro-----	4e	70	3.5	6.5
WsE:				
Waynesboro-----	6e	---	3.0	6.0
WtA:				
Wehadkee-----	6w	---	---	---
WyB:				
Wickham-----	2e	100	5.5	8.0

# Soil Survey of Paulding County, Georgia

Table 6.--Prime Farmland and Farmland of Statewide Importance

[Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland. If a soil is prime or important farmland only under certain conditions, the conditions are specified in parentheses after the soil name]

Map symbol	Map unit name	Farmland Classification
AeB	Allen loam, 2 to 6 percent slopes-----	All areas are prime farmland
AeC	Allen loam, 6 to 10 percent slopes-----	Farmland of statewide importance
AnB	Altavista sandy loam, 2 to 6 percent slopes-----	All areas are prime farmland
ApB	Appling-Hard Labor complex, 2 to 6 percent slopes-----	All areas are prime farmland
ApC	Appling-Hard Labor complex, 6 to 10 percent slopes-----	Farmland of statewide importance
ArB	Aragon sandy loam, 2 to 6 percent slopes-----	All areas are prime farmland
ArC	Aragon sandy loam, 6 to 10 percent slopes-----	Farmland of statewide importance
BrB	Braswell sandy loam, 2 to 6 percent slopes-----	All areas are prime farmland
BrC	Braswell sandy loam, 6 to 10 percent slopes-----	Farmland of statewide importance
CaA	Cartecay sandy loam, 0 to 3 percent slopes, occasionally flooded-----	Farmland of statewide importance
CfA	Cedarbluff loam, 0 to 2 percent slopes, occasionally flooded---	Farmland of statewide importance
ChA	Chewacla loam, 0 to 2 percent slopes, occasionally flooded---	Farmland of statewide importance
GrC	Grover-Mountain Park complex, 6 to 10 percent slopes-----	Farmland of statewide importance
HaB	Helena sandy loam, 2 to 6 percent slopes-----	All areas are prime farmland
MaC2	Madison sandy loam, 6 to 10 percent slopes, moderately eroded-----	Farmland of statewide importance
PaB2	Pacolet sandy loam, 2 to 6 percent slopes, moderately eroded---	All areas are prime farmland
PaC2	Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded-----	Farmland of statewide importance
PeA	Pettyjon loam, 0 to 2 percent slopes, occasionally flooded---	All areas are prime farmland
RnC	Rion sandy loam, 6 to 10 percent slopes-----	Farmland of statewide importance
ShA	Shady loam, 0 to 2 percent slopes, occasionally flooded-----	All areas are prime farmland
ShB	Shady loam, 2 to 6 percent slopes-----	All areas are prime farmland
StA	Steadman silt loam, 0 to 2 percent slopes, occasionally flooded-----	Farmland of statewide importance
ToA	Toccoa sandy loam, 0 to 3 percent slopes, occasionally flooded-----	Farmland of statewide importance
WyB	Wickham sandy loam, 2 to 6 percent slopes-----	All areas are prime farmland

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
<b>AaE2:</b>				
Agricola-----	Loblolly pine----- White oak-----	--- 75	--- 57	Loblolly pine, shortleaf pine
Lloyd-----	Loblolly pine----- White oak-----	--- 75	--- 57	Loblolly pine, shortleaf pine
Musella-----	Loblolly pine----- Virginia pine-----	--- 70	--- 50	Loblolly pine, shortleaf pine
<b>AcF2:</b>				
Agricola-----	Loblolly pine----- White oak-----	--- 70	--- 55	Loblolly pine, shortleaf pine
Lloyd-----	Loblolly pine----- White oak-----	--- 70	--- 57	Loblolly pine, shortleaf pine
Musella-----	Loblolly pine----- Virginia pine-----	--- 65	--- ---	Loblolly pine, shortleaf pine
<b>AeB:</b>				
Allen-----	Loblolly pine----- Shortleaf pine----- Yellow-poplar-----	80 72 87	114 114 86	Loblolly pine, shortleaf pine, yellow-poplar
<b>AeC:</b>				
Allen-----	Loblolly pine----- Shortleaf pine----- Yellow-poplar-----	80 72 87	114 114 86	Loblolly pine, shortleaf pine, yellow-poplar
<b>AeD:</b>				
Allen-----	Loblolly pine----- Shortleaf pine----- Yellow-poplar-----	80 72 87	114 114 86	Loblolly pine, shortleaf pine, yellow-poplar
<b>AeE:</b>				
Allen-----	Loblolly pine----- Shortleaf pine----- Yellow-poplar-----	80 72 87	114 114 86	Loblolly pine, shortleaf pine, yellow-poplar
<b>AnB:</b>				
Altavista-----	Loblolly pine----- White oak-----	91 77	129 57	Loblolly pine, yellow-poplar
<b>ApB:</b>				
Appling-----	Loblolly pine----- White oak-----	84 64	114 43	Loblolly pine, yellow-poplar
Hard Labor-----	Loblolly pine----- White oak-----	88 64	129 43	Loblolly pine, yellow-poplar
<b>ApC:</b>				
Appling-----	Loblolly pine----- White oak-----	84 64	114 43	Loblolly pine, yellow-poplar
Hard Labor-----	Loblolly pine----- White oak-----	88 64	129 43	Loblolly pine, yellow-poplar

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
ArB:				
Aragon-----	Loblolly pine-----	80	114	Loblolly pine, shortleaf pine
	Shortleaf pine-----	66	100	
	Virginia pine-----	73	114	
ArC:				
Aragon-----	Loblolly pine-----	80	114	Loblolly pine, shortleaf pine
	Shortleaf pine-----	66	100	
	Virginia pine-----	73	114	
BrB:				
Braswell-----	Loblolly pine-----	80	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	
BrC:				
Braswell-----	Loblolly pine-----	80	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	
BrD:				
Braswell-----	Loblolly pine-----	80	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	
CaA:				
Cartecay-----	Loblolly pine-----	95	143	Loblolly pine, yellow-poplar
	Yellow-poplar-----	105	114	
CfA:				
Cedarbluff-----	Loblolly pine-----	90	129	Loblolly pine, sweetgum
	Shortleaf pine-----	80	129	
ChA:				
Chewacla-----	Loblolly pine-----	95	143	Loblolly pine, sweetgum, yellow-poplar
	Yellow-poplar-----	95	100	
CrD:				
Crawfordville-----	Loblolly pine-----	67	86	Loblolly pine, shortleaf pine
	White oak-----	47	43	
Wateree-----	Loblolly pine-----	77	100	Loblolly pine, shortleaf pine, yellow-poplar
	White oak-----	68	57	
DAM:				
Dam.				
FrD:				
Fruithurst-----	Loblolly pine-----	75	86	Loblolly pine, shortleaf pine, yellow-poplar
	Shortleaf pine-----	65	86	
Braswell-----	Loblolly pine-----	80	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	
FrE:				
Fruithurst-----	Shortleaf pine-----	66	101	Loblolly pine, shortleaf pine
	White oak-----	70	52	
	Yellow-poplar-----	---	---	
Braswell-----	Loblolly pine-----	80	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
<b>FtE:</b>				
Fruithurst-----	Loblolly pine-----	65	57	Loblolly pine,
	Shortleaf pine-----	65	86	yellow-poplar
Tallapoosa-----	Loblolly pine-----	---	---	Loblolly pine,
	Shortleaf pine-----	65	86	shortleaf pine
<b>GrC:</b>				
Grover-----	Loblolly pine-----	80	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
Mountain Park-----	Loblolly pine-----	75	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
<b>GrD:</b>				
Grover-----	Loblolly pine-----	80	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
Mountain Park-----	Loblolly pine-----	75	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
<b>GrE:</b>				
Grover-----	Loblolly pine-----	80	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
Mountain Park-----	Loblolly pine-----	75	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
<b>GrF:</b>				
Grover-----	Loblolly pine-----	80	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
Mountain Park-----	Loblolly pine-----	75	114	Loblolly pine,
	White oak-----	---	---	yellow-poplar
<b>HaB:</b>				
Helena-----	Loblolly pine-----	84	114	Loblolly pine,
	Shortleaf pine-----	66	---	yellow-poplar
<b>LdB2:</b>				
Lloyd-----	Loblolly pine-----	85	114	Loblolly pine,
	White oak-----	80	57	shortleaf pine
Agricola-----	Loblolly pine-----	85	114	Loblolly pine,
	White oak-----	80	57	shortleaf pine
Musella-----	Loblolly pine-----	72	100	Loblolly pine,
	Virginia pine-----	65	80	shortleaf pine
<b>LdC2:</b>				
Lloyd-----	Loblolly pine-----	85	114	Loblolly pine,
	White oak-----	80	57	shortleaf pine
Agricola-----	Loblolly pine-----	80	105	Loblolly pine,
	White oak-----	75	55	shortleaf pine
Musella-----	Loblolly pine-----	72	100	Loblolly pine,
	Virginia pine-----	65	80	shortleaf pine

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
LdD2:				
Lloyd-----	Loblolly pine-----	85	114	Loblolly pine,
	White oak-----	80	57	shortleaf pine
Agricola-----	Loblolly pine-----	80	105	Loblolly pine,
	White oak-----	75	55	shortleaf pine
Musella-----	Loblolly pine-----	72	100	Loblolly pine,
	Virginia pine-----	65	80	shortleaf pine
MaC2:				
Madison-----	Loblolly pine-----	72	114	Loblolly pine,
	White oak-----	---	57	yellow-poplar
PaB2:				
Pacolet-----	Loblolly pine-----	70	86	Loblolly pine,
	Yellow-poplar-----	80	72	shortleaf pine, yellow-poplar
PaC2:				
Pacolet-----	Loblolly pine-----	70	86	Loblolly pine,
	Yellow-poplar-----	80	72	shortleaf pine, yellow-poplar
PaD2:				
Pacolet-----	Loblolly pine-----	70	86	Loblolly pine,
	Yellow-poplar-----	80	72	shortleaf pine, yellow-poplar
PeA:				
Pettyjon-----	Loblolly pine-----	90	129	Loblolly pine,
	White oak-----	80	57	shortleaf pine
	Yellow-poplar-----	100	107	
Eg:				
Pits, quarry.				
PoF:				
Poindexter-----	Loblolly pine-----	70	93	Loblolly pine,
	Shortleaf pine-----	60	88	white oak
Wilkes-----	Loblolly pine-----	65	100	Loblolly pine,
	Shortleaf pine-----	63	100	Virginia pine
PrE:				
Poindexter-----	Loblolly pine-----	70	93	Loblolly pine,
	Shortleaf pine-----	60	88	white oak
Wilkes-----	Loblolly pine-----	75	100	Loblolly pine,
	Shortleaf pine-----	63	100	shortleaf pine
Rowan-----	Loblolly pine-----	70	93	Loblolly pine,
	Shortleaf pine-----	60	88	white oak
PwC:				
Poindexter-----	Loblolly pine-----	70	93	Loblolly pine,
	Shortleaf pine-----	60	88	white oak
Wilkes-----	Loblolly pine-----	75	100	Loblolly pine,
	Shortleaf pine-----	63	100	shortleaf pine

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber cu ft/ac	
PwC:				
Wynott-----	Loblolly pine-----	75	100	Loblolly pine, shortleaf pine
	White oak-----	---	---	
PwD:				
Poindexter-----	Loblolly pine-----	70	93	Loblolly pine, white oak
	Shortleaf pine-----	60	88	
Wilkes-----	Loblolly pine-----	75	100	Loblolly pine, shortleaf pine
	Shortleaf pine-----	63	100	
Wynott-----	Loblolly pine-----	75	100	Loblolly pine, shortleaf pine
	White oak-----	---	---	
RnC:				
Rion-----	Loblolly pine-----	80	110	Loblolly pine, shortleaf pine
	White oak-----	70	52	
RnD:				
Rion-----	Loblolly pine-----	80	110	Loblolly pine, shortleaf pine
	White oak-----	70	52	
RnE:				
Rion-----	White oak-----	70	52	Shortleaf pine, loblolly pine
	Yellow-poplar-----	90	90	
RwF:				
Rock outcrop.				
Wake-----	Loblolly pine-----	50	72	Loblolly pine, shortleaf pine
	Shortleaf pine-----	50	72	
Wateree-----	Loblolly pine-----	68	---	Loblolly pine, shortleaf pine
	Shortleaf pine-----	69	---	
SeC:				
Sedgefield-----	Loblolly pine-----	84	114	Loblolly pine, yellow-poplar
	White oak-----	---	---	
Wateree-----	Loblolly pine-----	77	100	Loblolly pine, shortleaf pine, yellow-poplar
	White oak-----	68	57	
ShA:				
Shady-----	Loblolly pine-----	85	114	Loblolly pine, shortleaf pine
	Shortleaf pine-----	70	100	
	White oak-----	80	57	
ShB:				
Shady-----	Loblolly pine-----	85	114	Loblolly pine, shortleaf pine
	Shortleaf pine-----	70	100	
	White oak-----	80	57	
SpF:				
Sipsey-----	Loblolly pine-----	80	114	Loblolly pine, shortleaf pine
	Shortleaf pine-----	70	100	
	White oak-----	75	57	
Sunlight-----	Loblolly pine-----	70	86	Loblolly pine, shortleaf pine
	Shortleaf pine-----	60	72	

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
StA:				
Steadman-----	Loblolly pine-----	95	143	Shortleaf pine, loblolly pine
	Shortleaf pine-----	86	100	
TaF:				
Tallapoosa-----	Loblolly pine-----	70	86	Loblolly pine, shortleaf pine
	Shortleaf pine-----	60	86	
	Fruithurst-----	Loblolly pine-----	75	Loblolly pine, shortleaf pine
		Longleaf pine-----	65	
		Shortleaf pine-----	65	
ToA:				
Toccoa-----	Loblolly pine-----	90	129	Loblolly pine, yellow-poplar
	Yellow-poplar-----	107	114	
UaE:				
Udorthents.				
Ub:				
Urban land.				
W:				
Water.				
WaC:				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine, shortleaf pine, yellow-poplar
	White oak-----	68	57	
	Helena-----	Loblolly pine-----	84	Loblolly pine, shortleaf pine
		Shortleaf pine-----	66	
WaD:				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine, shortleaf pine, yellow-poplar
	White oak-----	68	57	
	Helena-----	Loblolly pine-----	84	Loblolly pine, shortleaf pine
		Shortleaf pine-----	66	
WeD:				
Wateree-----	Loblolly pine-----	77	105	Loblolly pine, shortleaf pine
	Shortleaf pine-----	---	---	
	White oak-----	---	---	
	Rion-----	Loblolly pine-----	80	Loblolly pine, shortleaf pine, yellow-poplar
		Shortleaf pine-----	70	
		White oak-----	70	
WeE:				
Wateree-----	Shortleaf pine-----	69	114	Loblolly pine, shortleaf pine
	White oak-----	68	57	
	Yellow-poplar-----	84	86	
	Rion-----	Shortleaf pine-----	70	Shortleaf pine, loblolly pine
		White oak-----	70	
		Yellow-poplar-----	90	

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
<b>WnC:</b>				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine,
	White oak-----	68	57	shortleaf pine
Rion-----	Loblolly pine-----	80	110	Loblolly pine,
	White oak-----	70	52	shortleaf pine
<b>WnD:</b>				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine,
	White oak-----	68	57	shortleaf pine
Rion-----	Loblolly pine-----	80	110	Loblolly pine,
	White oak-----	70	52	shortleaf pine
<b>WnE:</b>				
Wateree-----	Loblolly pine-----	77	100	Shortleaf pine,
	White oak-----	68	57	shortleaf pine
Rion-----	Loblolly pine-----	80	110	Shortleaf pine,
	White oak-----	70	52	loblolly pine
<b>WrC:</b>				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine,
	White oak-----	68	57	shortleaf pine,
				yellow-poplar
Wake-----	Loblolly pine-----	60	72	Loblolly pine,
	Shortleaf pine-----	50	72	shortleaf pine
<b>WrD:</b>				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine,
	White oak-----	68	57	shortleaf pine,
				yellow-poplar
Wake-----	Loblolly pine-----	60	72	Loblolly pine,
	Shortleaf pine-----	50	72	shortleaf pine
<b>WrE:</b>				
Wateree-----	Loblolly pine-----	77	100	Loblolly pine,
	White oak-----	68	57	shortleaf pine
Wake-----	Loblolly pine-----	60	72	Loblolly pine,
	Shortleaf pine-----	50	72	shortleaf pine
<b>WrF:</b>				
Wateree-----	Loblolly pine-----	84	86	Loblolly pine,
	Shortleaf pine-----	69	114	shortleaf pine
	White oak-----	68	57	
Wake-----	Loblolly pine-----	---	---	Loblolly pine,
	Shortleaf pine-----	50	72	shortleaf pine
<b>WsC:</b>				
Waynesboro-----	Loblolly pine-----	80	114	Loblolly pine,
	Shortleaf pine-----	72	100	shortleaf pine
<b>WsD:</b>				
Waynesboro-----	Loblolly pine-----	80	114	Loblolly pine,
	Shortleaf pine-----	72	100	shortleaf pine

Soil Survey of Paulding County, Georgia

Table 7.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber <i>cu ft/ac</i>	
<b>WsE:</b> Waynesboro-----	Loblolly pine----- Shortleaf pine-----	80 72	114 100	Loblolly pine, shortleaf pine
<b>WtA:</b> Wehadkee-----	Loblolly pine----- Yellow-poplar-----	93 100	143 114	Loblolly pine, yellow-poplar
<b>WyB:</b> Wickham-----	Loblolly pine----- White oak-----	90 84	129 72	Loblolly pine, shortleaf pine

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AaE2:						
Agricola-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderate Available water	0.50
Lloyd-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderate Available water	0.50
Musella-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
AcF2:						
Agricola-----	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.50 0.50	Moderate Available water	0.50
Lloyd-----	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Unsuited Slope Stickiness; high plasticity index Rock fragments	1.00 0.50 0.50	Moderate Available water	0.50
Musella-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
AeB:						
Allen-----	Well suited		Well suited		Low	
AeC:						
Allen-----	Well suited		Moderately suited Slope	0.50	Low	
AeD:						
Allen-----	Well suited		Moderately suited Slope	0.50	Low	
AeE:						
Allen-----	Well suited		Poorly suited Slope	0.75	Moderate Available water	0.50
AnB:						
Altavista-----	Well suited		Well suited		Low	
ApB:						
Appling-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ApB: Hard Labor-----	Well suited		Well suited		Low	
ApC: Appling-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Low	
Hard Labor-----	Well suited		Moderately suited Slope	0.50	Low	
ArB: Aragon-----	Well suited		Well suited		Low	
ArC: Aragon-----	Well suited		Moderately suited Slope	0.50	Low	
BrB: Braswell-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	
BrC: Braswell-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
BrD: Braswell-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
CaA: Cartecay-----	Well suited		Well suited		High Wetness	1.00
CfA: Cedarbluff-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	High Wetness	1.00
ChA: Chewacla-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	High Wetness	1.00
CrD: Crawfordville----	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	High Wetness	1.00
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
DAM: Dam-----	Not rated		Not rated		Not rated	

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
FrD:						
Fruithurst-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
Braswell-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
FrE:						
Fruithurst-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Braswell-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderate Available water	0.50
FtE:						
Fruithurst-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Tallapoosa-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
GrC:						
Grover-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
Mountain Park----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
GrD:						
Grover-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
Mountain Park----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
GrE:						
Grover-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Mountain Park----	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
GrF:						
Grover-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GrF: Mountain Park----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
HaB: Helena-----	Well suited		Well suited		Low	
LdB2: Lloyd-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	
Agricola-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	
Musella-----	Well suited		Moderately suited Rock fragments	0.50	Low	
LdC2: Lloyd-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Low	
Agricola-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
Musella-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
LdD2: Lloyd-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Low	
Agricola-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
Musella-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
MaC2: Madison-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index Slope	0.50 0.50	Low	
PaB2: Pacolet-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PaC2: Pacolet-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
PaD2: Pacolet-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
PeA: Pettyjon-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	High Wetness	1.00
Pg: Pits, quarry-----	Not rated		Not rated		Not rated	
PoF: Poindexter-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
Wilkes-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
PrE: Poindexter-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Wilkes-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Rowan-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
PwC: Poindexter-----	Well suited		Moderately suited Slope	0.50	Low	
Wilkes-----	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Low	
Wynott-----	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	Low	
PwD: Poindexter-----	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Low	

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PwD:						
Wilkes-----	Well suited		Moderately suited Rock fragments Slope	0.50 0.50	Low	
Wynott-----	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	Low	
RnC:						
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
RnD:						
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
RnE:						
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderate Available water	0.50
RwF:						
Rock outcrop----	Not rated		Not rated		Not rated	
Wake-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
Wateree-----	Well suited		Moderately suited Slope Rock fragments	0.50 0.50	Low	
SeC:						
Sedgefield-----	Poorly suited Stickiness; high plasticity index	0.75	Poorly suited Stickiness; high plasticity index Slope	0.75 0.50	Low	
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
ShA:						
Shady-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	High Wetness	1.00
ShB:						
Shady-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50	Low	

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SpF:						
Sipsey-----	Moderately suited		Unsuited		Moderate	
	Slope	0.50	Slope	1.00	Available water	0.50
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		
Sunlight-----	Moderately suited		Unsuited		Moderate	
	Slope	0.50	Slope	1.00	Available water	0.50
	Rock fragments	0.50	Rock fragments	0.50		
StA:						
Steadman-----	Well suited		Well suited		High Wetness	1.00
TaF:						
Tallapoosa-----	Moderately suited		Unsuited		Moderate	
	Slope	0.50	Slope	1.00	Available water	0.50
			Rock fragments	0.50		
Fruithurst-----	Moderately suited		Unsuited		Moderate	
	Slope	0.50	Slope	1.00	Available water	0.50
			Rock fragments	0.50		
ToA:						
Toccoa-----	Well suited		Well suited		High Wetness	1.00
UaE:						
Udorthents-----	Not rated		Not rated		Not rated	
Ub:						
Urban land-----	Not rated		Not rated		Not rated	
W:						
Water-----	Not rated		Not rated		Not rated	
WaC:						
Wateree-----	Well suited		Moderately suited		Low	
			Slope	0.50		
Helena-----	Well suited		Moderately suited		High Wetness	1.00
			Slope	0.50		
WaD:						
Wateree-----	Well suited		Moderately suited		Low	
			Slope	0.50		
Helena-----	Well suited		Moderately suited		High Wetness	1.00
			Slope	0.50		
WeD:						
Wateree-----	Well suited		Moderately suited		Low	
			Slope	0.50		
			Rock fragments	0.50		
Rion-----	Well suited		Moderately suited		Low	
			Slope	0.50		
			Rock fragments	0.50		

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WeE:</b>						
Wateree-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
Rion-----	Well suited		Poorly suited Slope Rock fragments	0.75 0.50	Moderate Available water	0.50
<b>WnC:</b>						
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
<b>WnD:</b>						
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Low	
<b>WnE:</b>						
Wateree-----	Well suited		Poorly suited Slope	0.75	Moderate Available water	0.50
Rion-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Stickiness; high plasticity index	0.75 0.50	Moderate Available water	0.50
<b>WrC:</b>						
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
Wake-----	Well suited		Moderately suited Slope	0.50	Low	
<b>WrD:</b>						
Wateree-----	Well suited		Moderately suited Slope	0.50	Low	
Wake-----	Well suited		Moderately suited Slope	0.50	Low	
<b>WrE:</b>						
Wateree-----	Well suited		Poorly suited Slope	0.75	Moderate Available water	0.50
Wake-----	Well suited		Poorly suited Slope	0.75	Moderate Available water	0.50

Soil Survey of Paulding County, Georgia

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Potential for seedling mortality	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WrF:						
Wateree-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
Wake-----	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50	Moderate Available water	0.50
WsC:						
Waynesboro-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Rock fragments Slope Stickiness; high plasticity index	0.50 0.50 0.50	Low	
WsD:						
Waynesboro-----	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Rock fragments Slope Stickiness; high plasticity index	0.50 0.50 0.50	Low	
WsE:						
Waynesboro-----	Moderately suited Stickiness; high plasticity index	0.50	Poorly suited Slope Rock fragments Stickiness; high plasticity index	0.75 0.50 0.50	Moderate Available water	0.50
WtA:						
Wehadkee-----	Moderately suited Wetness Stickiness; high plasticity index	0.50 0.50	Moderately suited Wetness Stickiness; high plasticity index	0.50 0.50	High Wetness	1.00
WyB:						
Wickham-----	Well suited		Well suited		Low	

# Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Moderate Slope/erodibility	0.50	Poorly suited Slope	1.00
Lloyd-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Musella-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
<b>AcF2:</b>				
Agricola-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Lloyd-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Musella-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
<b>AeB:</b>				
Allen-----	Slight		Moderately suited Low strength	0.50
<b>AeC:</b>				
Allen-----	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>AeD:</b>				
Allen-----	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>AeE:</b>				
Allen-----	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
<b>AnB:</b>				
Altavista-----	Moderate Slope/erodibility	0.50	Well suited	
<b>ApB:</b>				
Appling-----	Moderate Slope/erodibility	0.50	Well suited	
Hard Labor-----	Moderate Slope/erodibility	0.50	Well suited	
<b>ApC:</b>				
Appling-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ApC: Hard Labor-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
ArB: Aragon-----	Moderate Slope/erodibility	0.50	Well suited	
ArC: Aragon-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
BrB: Braswell-----	Moderate Slope/erodibility	0.50	Well suited	
BrC: Braswell-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
BrD: Braswell-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
CaA: Cartecay-----	Slight		Moderately suited Wetness Flooding	0.50 0.50
CfA: Cedarbluff-----	Slight		Poorly suited Flooding Wetness Low strength	1.00 0.50 0.50
ChA: Chewacla-----	Slight		Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
CrD: Crawfordville-----	Moderate Slope/erodibility	0.50	Moderately suited Slope Wetness	0.50 0.50
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
DAM: Dam-----	Not rated		Not rated	
FrD: Fruithurst-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Braswell-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
FrE:				
Fruithurst-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Braswell-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
FtE:				
Fruithurst-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Tallapoosa-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
GrC:				
Grover-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Mountain Park-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
GrD:				
Grover-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Mountain Park-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
GrE:				
Grover-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Mountain Park-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
GrF:				
Grover-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Mountain Park-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
HaB:				
Helena-----	Moderate Slope/erodibility	0.50	Well suited	
LdB2:				
Lloyd-----	Moderate Slope/erodibility	0.50	Well suited	
Agricola-----	Slight		Well suited	
Musella-----	Slight		Well suited	
LdC2:				
Lloyd-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Agricola-----	Slight		Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
LdC2:				
Musella-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
LdD2:				
Lloyd-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Agricola-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Musella-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
MaC2:				
Madison-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
PaB2:				
Pacolet-----	Slight		Well suited	
PaC2:				
Pacolet-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
PaD2:				
Pacolet-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
PeA:				
Pettyjon-----	Slight		Moderately suited Low strength Flooding	0.50 0.50
Pg:				
Pits, quarry-----	Not rated		Not rated	
PoF:				
Poindexter-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Wilkes-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
PrE:				
Poindexter-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Wilkes-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rowan-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
PwC:				
Poindexter-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Wilkes-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PwC:				
Wynott-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
PwD:				
Poindexter-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
Wilkes-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Wynott-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
RnC:				
Rion-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
RnD:				
Rion-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
RnE:				
Rion-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
RwF:				
Rock outcrop-----	Not rated		Not rated	
Wake-----	Moderate Slope/erodibility	0.50	Poorly suited Slope Rock fragments	1.00 0.50
Wateree-----	Moderate Slope/erodibility	0.50	Poorly suited Slope Rock fragments	1.00 0.50
SeC:				
Sedgefield-----	Moderate Slope/erodibility	0.50	Moderately suited Wetness Slope	0.50 0.50
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
ShA:				
Shady-----	Slight		Poorly suited Flooding Low strength	1.00 0.50
ShB:				
Shady-----	Slight		Moderately suited Low strength	0.50
SpF:				
Sipsey-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Sunlight-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
StA:				
Steadman-----	Slight		Poorly suited	
			Flooding	1.00
			Low strength	0.50
TaF:				
Tallapoosa-----	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
Fruithurst-----	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
ToA:				
Toccoa-----	Slight		Moderately suited	
			Flooding	0.50
UaE:				
Udorthents-----	Not rated		Not rated	
Ub:				
Urban land-----	Not rated		Not rated	
W:				
Water-----	Not rated		Not rated	
WaC:				
Wateree-----	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
Helena-----	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
WaD:				
Wateree-----	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
Helena-----	Severe		Moderately suited	
	Slope/erodibility	0.95	Slope	0.50
WeD:				
Wateree-----	Moderate		Moderately suited	
	Slope/erodibility	0.50	Slope	0.50
			Rock fragments	0.50
			Landslides	0.05
Rion-----	Severe		Moderately suited	
	Slope/erodibility	0.95	Slope	0.50
			Rock fragments	0.50
WeE:				
Wateree-----	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
			Rock fragments	0.50
Rion-----	Severe		Poorly suited	
	Slope/erodibility	0.95	Slope	1.00
			Rock fragments	0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WnC:</b>				
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Rion-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
<b>WnD:</b>				
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Rion-----	Severe Slope/erodibility	0.95	Moderately suited Slope	0.50
<b>WnE:</b>				
Wateree-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rion-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
<b>WrC:</b>				
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Wake-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
<b>WrD:</b>				
Wateree-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
Wake-----	Moderate Slope/erodibility	0.50	Moderately suited Slope	0.50
<b>WrE:</b>				
Wateree-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Wake-----	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
<b>WrF:</b>				
Wateree-----	Severe Slope/erodibility	0.95	Poorly suited Slope Rock fragments	1.00 0.50
Wake-----	Severe Slope/erodibility	0.95	Poorly suited Slope Rock fragments	1.00 0.50
<b>WsC:</b>				
Waynesboro-----	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>WsD:</b>				
Waynesboro-----	Moderate Slope/erodibility	0.50	Moderately suited Slope Low strength	0.50 0.50

Soil Survey of Paulding County, Georgia

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WsE: Waynesboro-----	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
WtA: Wehadkee-----	Slight		Poorly suited Ponding Flooding Wetness Low strength	1.00 1.00 1.00 0.50
WyB: Wickham-----	Moderate Slope/erodibility	0.50	Well suited	

# Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Lloyd-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Musella-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>AcF2:</b>				
Agricola-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Lloyd-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Musella-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>AeB:</b>				
Allen-----	Moderately suited Low strength	0.50	Moderately suited Low strength	0.50
<b>AeC:</b>				
Allen-----	Moderately suited Low strength	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>AeD:</b>				
Allen-----	Moderately suited Low strength	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>AeE:</b>				
Allen-----	Moderately suited Low strength Slope	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50
<b>AnB:</b>				
Altavista-----	Well suited		Well suited	
<b>ApB:</b>				
Appling-----	Well suited		Well suited	
Hard Labor-----	Well suited		Well suited	
<b>ApC:</b>				
Appling-----	Well suited		Moderately suited Slope	0.50
Hard Labor-----	Well suited		Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ArB: Aragon-----	Well suited		Well suited	
ArC: Aragon-----	Well suited		Moderately suited Slope	0.50
BrB: Braswell-----	Well suited		Well suited	
BrC: Braswell-----	Well suited		Moderately suited Slope	0.50
BrD: Braswell-----	Well suited		Moderately suited Slope	0.50
CaA: Cartecay-----	Well suited		Moderately suited Wetness Flooding	0.50 0.50
CfA: Cedarbluff-----	Moderately suited Low strength	0.50	Poorly suited Flooding Wetness Low strength	1.00 0.50 0.50
ChA: Chewacla-----	Moderately suited Low strength	0.50	Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
CrD: Crawfordville-----	Well suited		Moderately suited Slope Wetness	0.50 0.50
Wateree-----	Well suited		Moderately suited Slope	0.50
DAM: Dam-----	Not rated		Not rated	
FrD: Fruithurst-----	Well suited		Moderately suited Slope	0.50
Braswell-----	Well suited		Moderately suited Slope	0.50
FrE: Fruithurst-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Braswell-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>FtE:</b>				
Fruithurst-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Tallapoosa-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>GrC:</b>				
Grover-----	Well suited		Moderately suited Slope	0.50
Mountain Park-----	Well suited		Moderately suited Slope	0.50
<b>GrD:</b>				
Grover-----	Well suited		Moderately suited Slope	0.50
Mountain Park-----	Well suited		Moderately suited Slope	0.50
<b>GrE:</b>				
Grover-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Mountain Park-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>GrF:</b>				
Grover-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Mountain Park-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>HaB:</b>				
Helena-----	Well suited		Well suited	
<b>LdB2:</b>				
Lloyd-----	Well suited		Well suited	
Agricola-----	Well suited		Well suited	
Musella-----	Well suited		Well suited	
<b>LdC2:</b>				
Lloyd-----	Well suited		Moderately suited Slope	0.50
Agricola-----	Well suited		Moderately suited Slope	0.50
Musella-----	Well suited		Moderately suited Slope	0.50
<b>LdD2:</b>				
Lloyd-----	Well suited		Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
LdD2: Agricola-----	Well suited		Moderately suited Slope	0.50
Musella-----	Well suited		Moderately suited Slope	0.50
MaC2: Madison-----	Well suited		Moderately suited Slope	0.50
PaB2: Pacolet-----	Well suited		Well suited	
PaC2: Pacolet-----	Well suited		Moderately suited Slope	0.50
PaD2: Pacolet-----	Well suited		Moderately suited Slope	0.50
PeA: Pettyjon-----	Moderately suited Low strength	0.50	Moderately suited Low strength Flooding	0.50 0.50
Pg: Pits, quarry-----	Not rated		Not rated	
PoF: Poindexter-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Wilkes-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
PrE: Poindexter-----	Well suited		Poorly suited Slope	1.00
Wilkes-----	Well suited		Poorly suited Slope	1.00
Rowan-----	Well suited		Poorly suited Slope	1.00
PwC: Poindexter-----	Well suited		Moderately suited Slope	0.50
Wilkes-----	Well suited		Moderately suited Slope	0.50
Wynott-----	Well suited		Moderately suited Slope	0.50
PwD: Poindexter-----	Well suited		Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PwD:				
Wilkes-----	Well suited		Moderately suited Slope	0.50
Wynott-----	Well suited		Moderately suited Slope	0.50
RnC:				
Rion-----	Well suited		Moderately suited Slope	0.50
RnD:				
Rion-----	Well suited		Moderately suited Slope	0.50
RnE:				
Rion-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
RwF:				
Rock outcrop-----	Not rated		Not rated	
Wake-----	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	1.00 0.50
Wateree-----	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	1.00 0.50
SeC:				
Sedgefield-----	Well suited		Moderately suited Wetness Slope	0.50 0.50
Wateree-----	Well suited		Moderately suited Slope	0.50
ShA:				
Shady-----	Moderately suited Low strength	0.50	Poorly suited Flooding Low strength	1.00 0.50
ShB:				
Shady-----	Moderately suited Low strength	0.50	Moderately suited Low strength	0.50
SpF:				
Sipsey-----	Poorly suited Slope	1.00	Poorly suited Slope	1.00
Sunlight-----	Poorly suited Slope	1.00	Poorly suited Slope	1.00
StA:				
Steadman-----	Moderately suited Low strength	0.50	Poorly suited Flooding Low strength	1.00 0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
TaF:				
Tallapoosa-----	Poorly suited Slope	1.00	Poorly suited Slope	1.00
Fruithurst-----	Poorly suited Slope	1.00	Poorly suited Slope	1.00
ToA:				
Toccoa-----	Well suited		Moderately suited Flooding	0.50
UaE:				
Udorthents-----	Not rated		Not rated	
Ub:				
Urban land-----	Not rated		Not rated	
W:				
Water-----	Not rated		Not rated	
WaC:				
Wateree-----	Well suited		Moderately suited Slope	0.50
Helena-----	Well suited		Moderately suited Slope	0.50
WaD:				
Wateree-----	Well suited		Moderately suited Slope	0.50
Helena-----	Well suited		Moderately suited Slope	0.50
WeD:				
Wateree-----	Moderately suited Rock fragments	0.50	Moderately suited Slope Rock fragments Landslides	0.50 0.50 0.05
Rion-----	Moderately suited Rock fragments	0.50	Moderately suited Slope Rock fragments	0.50 0.50
WeE:				
Wateree-----	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	1.00 0.50
Rion-----	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	1.00 0.50
WnC:				
Wateree-----	Well suited		Moderately suited Slope	0.50
Rion-----	Well suited		Moderately suited Slope	0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WnD:</b>				
Wateree-----	Well suited		Moderately suited Slope	0.50
Rion-----	Well suited		Moderately suited Slope	0.50
<b>WnE:</b>				
Wateree-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Rion-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>WrC:</b>				
Wateree-----	Well suited		Moderately suited Slope	0.50
Wake-----	Well suited		Moderately suited Slope	0.50
<b>WrD:</b>				
Wateree-----	Well suited		Moderately suited Slope	0.50
Wake-----	Well suited		Moderately suited Slope	0.50
<b>WrE:</b>				
Wateree-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
Wake-----	Moderately suited Slope	0.50	Poorly suited Slope	1.00
<b>WrF:</b>				
Wateree-----	Moderately suited Slope Rock fragments	0.50 0.50	Poorly suited Slope Rock fragments	1.00 0.50
Wake-----	Moderately suited Slope Rock fragments	0.50 0.50	Poorly suited Slope Rock fragments	1.00 0.50
<b>WsC:</b>				
Waynesboro-----	Moderately suited Low strength	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>WsD:</b>				
Waynesboro-----	Moderately suited Low strength	0.50	Moderately suited Slope Low strength	0.50 0.50
<b>WsE:</b>				
Waynesboro-----	Moderately suited Low strength Slope	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50

Soil Survey of Paulding County, Georgia

Table 8c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Suitability for use of harvesting equipment		Suitability for log landings	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WtA:				
Wehadkee-----	Poorly suited		Poorly suited	
	Wetness	1.00	Ponding	1.00
	Low strength	0.50	Flooding	1.00
			Wetness	1.00
			Low strength	0.50
WyB:				
Wickham-----	Well suited		Well suited	

# Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Very limited Slope	1.00	Very limited Slope	1.00
Lloyd-----	Very limited Slope	1.00	Very limited Slope	1.00
Musella-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
<b>AcF2:</b>				
Agricola-----	Very limited Slope	1.00	Very limited Slope	1.00
Lloyd-----	Very limited Slope	1.00	Very limited Slope	1.00
Musella-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
<b>AeB:</b>				
Allen-----	Not limited		Not limited	
<b>AeC:</b>				
Allen-----	Not limited		Not limited	
<b>AeD:</b>				
Allen-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
<b>AeE:</b>				
Allen-----	Very limited Slope	1.00	Very limited Slope	1.00
<b>AnB:</b>				
Altavista-----	Somewhat limited Depth to saturated zone	0.24	Somewhat limited Depth to saturated zone	0.12
<b>ApB:</b>				
Appling-----	Not limited		Not limited	
Hard Labor-----	Somewhat limited Slow water movement	0.60	Somewhat limited Slow water movement	0.60
<b>ApC:</b>				
Appling-----	Not limited		Not limited	
Hard Labor-----	Somewhat limited Slow water movement	0.60	Somewhat limited Slow water movement	0.60

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ArB: Aragon-----	Somewhat limited Slow water movement	0.94	Somewhat limited Slow water movement	0.94
ArC: Aragon-----	Somewhat limited Slow water movement	0.94	Somewhat limited Slow water movement	0.94
BrB: Braswell-----	Not limited		Not limited	
BrC: Braswell-----	Not limited		Not limited	
BrD: Braswell-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
CaA: Cartecay-----	Very limited Depth to saturated zone Flooding	1.00 1.00	Somewhat limited Depth to saturated zone	0.99
CfA: Cedarbluff-----	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.96	Somewhat limited Slow water movement Depth to saturated zone	0.96 0.88
ChA: Chewacla-----	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00
CrD: Crawfordville-----	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slow water movement	1.00 1.00
Wateree-----	Not limited		Not limited	
DAM: Dam-----	Not Rated		Not Rated	
FrD: Fruithurst-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
Braswell-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
FrE: Fruithurst-----	Very limited Slope	1.00	Very limited Slope	1.00
Braswell-----	Very limited Slope	1.00	Very limited Slope	1.00

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>FtE:</b>				
Fruithurst-----	Very limited Slope	1.00	Very limited Slope	1.00
Tallapoosa-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
<b>GrC:</b>				
Grover-----	Not limited		Not limited	
Mountain Park-----	Not limited		Not limited	
<b>GrD:</b>				
Grover-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Mountain Park-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
<b>GrE:</b>				
Grover-----	Very limited Slope	1.00	Very limited Slope	1.00
Mountain Park-----	Very limited Slope	1.00	Very limited Slope	1.00
<b>GrF:</b>				
Grover-----	Very limited Slope	1.00	Very limited Slope	1.00
Mountain Park-----	Very limited Slope	1.00	Very limited Slope	1.00
<b>HaB:</b>				
Helena-----	Somewhat limited Slow water movement Depth to saturated zone	0.94 0.24	Somewhat limited Slow water movement Depth to saturated zone	0.94 0.12
<b>LdB2:</b>				
Lloyd-----	Not limited		Not limited	
Agricola-----	Not limited		Not limited	
Musella-----	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00
<b>LdC2:</b>				
Lloyd-----	Not limited		Not limited	
Agricola-----	Not limited		Not limited	
Musella-----	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00
<b>LdD2:</b>				
Lloyd-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
LdD2:				
Agricola-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Musella-----	Very limited Depth to bedrock Slope	1.00 0.63	Very limited Depth to bedrock Slope	1.00 0.63
MaC2:				
Madison-----	Not limited		Not limited	
PaB2:				
Pacolet-----	Not limited		Not limited	
PaC2:				
Pacolet-----	Not limited		Not limited	
PaD2:				
Pacolet-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
PeA:				
Pettyjon-----	Very limited Flooding	1.00	Not limited	
Pg:				
Pits, quarry-----	Not Rated		Not Rated	
PoF:				
Poindexter-----	Very limited Slope	1.00	Very limited Slope	1.00
Wilkes-----	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.50
PrE:				
Poindexter-----	Very limited Slope	1.00	Very limited Slope	1.00
Wilkes-----	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.50
Rowan-----	Very limited Slope Gravel	1.00 0.40	Very limited Slope Gravel	1.00 0.40
PwC:				
Poindexter-----	Not limited		Not limited	
Wilkes-----	Very limited Depth to bedrock Slow water movement	1.00 0.50	Very limited Depth to bedrock Slow water movement	1.00 0.50
Wynott-----	Somewhat limited Slow water movement	0.94	Somewhat limited Slow water movement	0.94

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PwD:				
Poindexter-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Wilkes-----	Very limited Depth to bedrock Slope Slow water movement	1.00 0.63 0.50	Very limited Depth to bedrock Slope Slow water movement	1.00 0.63 0.50
Wynott-----	Somewhat limited Slow water movement Slope	0.94 0.63	Somewhat limited Slow water movement Slope	0.94 0.63
RnC:				
Rion-----	Not limited		Not limited	
RnD:				
Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
RnE:				
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00
RwF:				
Rock outcrop-----	Not Rated		Not Rated	
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
SeC:				
Sedgefield-----	Somewhat limited Depth to saturated zone Slow water movement	0.98 0.94	Somewhat limited Slow water movement Depth to saturated zone	0.94 0.75
Wateree-----	Not limited		Not limited	
ShA:				
Shady-----	Very limited Flooding	1.00	Not limited	
ShB:				
Shady-----	Not limited		Not limited	
SpF:				
Sipsey-----	Very limited Slope	1.00	Very limited Slope	1.00
Sunlight-----	Very limited Slope Depth to bedrock Gravel	1.00 1.00 0.26	Very limited Slope Depth to bedrock Gravel	1.00 1.00 0.26

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
StA:				
Steadman-----	Very limited Flooding Depth to saturated zone	1.00 0.39	Somewhat limited Depth to saturated zone	0.19
TaF:				
Tallapoosa-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
Fruithurst-----	Very limited Slope	1.00	Very limited Slope	1.00
ToA:				
Toccoa-----	Very limited Flooding	1.00	Not limited	
UaE:				
Udorthents-----	Not Rated		Not Rated	
Ub:				
Urban land-----	Not Rated		Not Rated	
W:				
Water-----	Not Rated		Not Rated	
WaC:				
Wateree-----	Not limited		Not limited	
Helena-----	Somewhat limited Slow water movement Depth to saturated zone	0.94 0.24	Somewhat limited Slow water movement Depth to saturated zone	0.94 0.12
WaD:				
Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Helena-----	Somewhat limited Slow water movement Slope Depth to saturated zone	0.94 0.63 0.24	Somewhat limited Slow water movement Slope Depth to saturated zone	0.94 0.63 0.12
WeD:				
Wateree-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
Rion-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
WeE:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WnC:				
Wateree-----	Not limited		Not limited	
Rion-----	Not limited		Not limited	
WnD:				
Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
WnE:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00
WrC:				
Wateree-----	Not limited		Not limited	
Wake-----	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00
WrD:				
Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Wake-----	Very limited Depth to bedrock Slope	1.00 0.63	Very limited Depth to bedrock Slope	1.00 0.63
WrE:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
WrF:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
WsC:				
Waynesboro-----	Not limited		Not limited	
WsD:				
Waynesboro-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
WsE:				
Waynesboro-----	Very limited Slope	1.00	Very limited Slope	1.00

Soil Survey of Paulding County, Georgia

Table 9a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Camp areas		Picnic areas	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WtA:				
Wehadkee-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00		
WyB:				
Wickham-----	Not limited		Not limited	

Soil Survey of Paulding County, Georgia

Table 9b.--Recreational Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>						
Agricola-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
	Gravel	0.30			Depth to bedrock	0.16
	Depth to bedrock	0.16				
<b>Lloyd-----</b>						
	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
	Gravel	0.30				
<b>Musella-----</b>						
	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Depth to bedrock	1.00
	Depth to bedrock	1.00			Slope	1.00
	Gravel	0.30			Droughty	0.92
<b>AcF2:</b>						
Agricola-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel	0.30			Depth to bedrock	0.16
	Depth to bedrock	0.16				
<b>Lloyd-----</b>						
	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel	0.30				
<b>Musella-----</b>						
	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00			Slope	1.00
	Gravel	0.30			Droughty	0.92
<b>AeB:</b>						
Allen-----	Somewhat limited		Not limited		Not limited	
	Slope	0.50				
	Gravel	0.06				
<b>AeC:</b>						
Allen-----	Very limited		Not limited		Not limited	
	Slope	1.00				
	Gravel	0.06				
<b>AeD:</b>						
Allen-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63
	Gravel	0.06				
<b>AeE:</b>						
Allen-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
	Gravel	0.06				
<b>AnB:</b>						
Altavista-----	Somewhat limited		Not limited		Somewhat limited	
	Slope	0.50			Depth to saturated zone	0.12
	Depth to saturated zone	0.24				

Soil Survey of Paulding County, Georgia

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ApB:						
Appling-----	Somewhat limited Slope	0.50	Not limited		Not limited	
Hard Labor-----	Somewhat limited Slow water movement Slope	0.60 0.50	Not limited		Not limited	
ApC:						
Appling-----	Very limited Slope	1.00	Not limited		Not limited	
Hard Labor-----	Very limited Slope Slow water movement	1.00 0.60	Not limited		Not limited	
ArB:						
Aragon-----	Somewhat limited Slow water movement Slope	0.94 0.50	Not limited		Not limited	
ArC:						
Aragon-----	Very limited Slope Slow water movement	1.00 0.94	Not limited		Not limited	
BrB:						
Braswell-----	Somewhat limited Slope	0.50	Not limited		Not limited	
BrC:						
Braswell-----	Very limited Slope	1.00	Not limited		Not limited	
BrD:						
Braswell-----	Very limited Slope	1.00	Not limited		Somewhat limited Slope	0.63
CaA:						
Cartecay-----	Very limited Depth to saturated zone Flooding	1.00 0.60	Somewhat limited Depth to saturated zone	0.98	Somewhat limited Depth to saturated zone Flooding	0.99 0.60
CfA:						
Cedarbluff-----	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.96 0.60	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone Flooding	0.88 0.60
ChA:						
Chewacla-----	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60

Soil Survey of Paulding County, Georgia

Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CrD:						
Crawfordville-----	Very limited Slow water movement Depth to saturated zone Slope Depth to bedrock	1.00 1.00 1.00 0.84	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Depth to bedrock Droughty	1.00 0.84 0.69
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Droughty	0.46 0.08
DAM:						
Dam-----	Not Rated		Not Rated		Not rated	
FrD:						
Fruithurst-----	Very limited Slope Depth to bedrock	1.00 0.10	Not limited		Somewhat limited Slope Large stones Depth to bedrock	0.37 0.16 0.10
Braswell-----	Very limited Slope	1.00	Not limited		Somewhat limited Slope	0.37
FrE:						
Fruithurst-----	Very limited Slope Depth to bedrock	1.00 0.10	Somewhat limited Slope	0.50	Very limited Slope Large stones Depth to bedrock	1.00 0.16 0.10
Braswell-----	Very limited Slope	1.00	Somewhat limited Slope	0.50	Very limited Slope	1.00
FtE:						
Fruithurst-----	Very limited Slope Depth to bedrock	1.00 0.10	Somewhat limited Slope	0.50	Very limited Slope Large stones Depth to bedrock	1.00 0.16 0.10
Tallapoosa-----	Very limited Slope Depth to bedrock	1.00 1.00	Somewhat limited Slope	0.50	Very limited Depth to bedrock Slope Droughty Large stones	1.00 1.00 0.99 0.16
GrC:						
Grover-----	Very limited Slope Gravel	1.00 0.97	Not limited		Not limited	
Mountain Park-----	Very limited Slope Gravel Depth to bedrock	1.00 0.96 0.29	Not limited		Somewhat limited Depth to bedrock	0.29
GrD:						
Grover-----	Very limited Slope Gravel	1.00 0.97	Not limited		Somewhat limited Slope	0.63

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GrD:						
Mountain Park-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63
	Gravel	0.96			Depth to bedrock	0.29
	Depth to bedrock	0.29				
GrE:						
Grover-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
	Gravel	0.97				
Mountain Park-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
	Gravel	0.96			Depth to bedrock	0.29
	Depth to bedrock	0.29				
GrF:						
Grover-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel	0.97				
Mountain Park-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Gravel	0.96			Depth to bedrock	0.29
	Depth to bedrock	0.29				
HaB:						
Helena-----	Somewhat limited		Not limited		Somewhat limited	
	Slow water movement	0.94			Depth to saturated	0.12
	Slope	0.50			zone	
	Depth to saturated	0.24				
	zone					
LdB2:						
Lloyd-----	Somewhat limited		Not limited		Not limited	
	Slope	0.50				
Agricola-----	Somewhat limited		Not limited		Somewhat limited	
	Slope	0.50			Depth to bedrock	0.16
	Depth to bedrock	0.16				
Musella-----	Very limited		Not limited		Very limited	
	Depth to bedrock	1.00			Depth to bedrock	1.00
	Slope	0.50			Droughty	0.92
LdC2:						
Lloyd-----	Very limited		Not limited		Not limited	
	Slope	1.00				
Agricola-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Depth to bedrock	0.16
	Depth to bedrock	0.16				
Musella-----	Very limited		Not limited		Very limited	
	Slope	1.00			Depth to bedrock	1.00
	Depth to bedrock	1.00			Droughty	0.92
LdD2:						
Lloyd-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
IldD2:						
Agricola-----	Very limited Slope Depth to bedrock	1.00 0.16	Not limited		Somewhat limited Slope Depth to bedrock	0.63 0.16
Musella-----	Very limited Slope Depth to bedrock	1.00 1.00	Not limited		Very limited Depth to bedrock Droughty Slope	1.00 0.92 0.63
MaC2:						
Madison-----	Very limited Slope	1.00	Not limited		Not limited	
PaB2:						
Pacolet-----	Somewhat limited Slope	0.50	Not limited		Not limited	
PaC2:						
Pacolet-----	Very limited Slope	1.00	Not limited		Not limited	
PaD2:						
Pacolet-----	Very limited Slope	1.00	Not limited		Somewhat limited Slope	0.63
PeA:						
Pettyjon-----	Somewhat limited Flooding	0.60	Not limited		Somewhat limited Flooding	0.60
Pg:						
Pits, quarry-----	Not Rated		Not Rated		Not rated	
PoF:						
Poindexter-----	Very limited Slope Gravel Depth to bedrock	1.00 0.97 0.46	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.46
Wilkes-----	Very limited Slope Depth to bedrock Slow water movement Gravel	1.00 1.00 0.50 0.07	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty Large stones	1.00 1.00 0.99 0.26
PrE:						
Poindexter-----	Very limited Slope Gravel Depth to bedrock	1.00 0.59 0.46	Somewhat limited Slope	0.18	Very limited Slope Depth to bedrock	1.00 0.46
Wilkes-----	Very limited Slope Depth to bedrock Slow water movement Gravel	1.00 1.00 0.50 0.44	Somewhat limited Slope	0.18	Very limited Depth to bedrock Slope Droughty Large stones	1.00 1.00 0.99 0.61
Rowan-----	Very limited Slope Gravel	1.00 1.00	Somewhat limited Slope	0.18	Very limited Slope Gravel Large stones	1.00 0.40 0.01

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PwC:						
Poindexter-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Depth to bedrock	0.46
	Gravel	0.59				
	Depth to bedrock	0.46				
Wilkes-----	Very limited		Not limited		Very limited	
	Slope	1.00			Depth to bedrock	1.00
	Depth to bedrock	1.00			Droughty	0.99
	Slow water movement	0.50			Large stones	0.16
Wynott-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Depth to bedrock	0.29
	Slow water movement	0.94				
	Gravel	0.62				
	Depth to bedrock	0.29				
PwD:						
Poindexter-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63
	Gravel	0.96			Depth to bedrock	0.46
	Depth to bedrock	0.46				
Wilkes-----	Very limited		Not limited		Very limited	
	Slope	1.00			Depth to bedrock	1.00
	Depth to bedrock	1.00			Droughty	0.99
	Slow water movement	0.50			Slope	0.63
	Gravel	0.02			Large stones	0.20
Wynott-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63
	Slow water movement	0.94			Depth to bedrock	0.29
	Gravel	0.66				
	Depth to bedrock	0.29				
RnC:						
Rion-----	Very limited		Not limited		Not limited	
	Slope	1.00				
RnD:						
Rion-----	Very limited		Not limited		Somewhat limited	
	Slope	1.00			Slope	0.63
RnE:						
Rion-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.50	Slope	1.00
RwF:						
Rock outcrop-----	Not Rated		Not Rated		Not rated	
Wake-----	Very limited		Not limited		Very limited	
	Slope	1.00			Depth to bedrock	1.00
	Depth to bedrock	1.00			Droughty	1.00
					Slope	1.00
Wateree-----	Very limited		Not limited		Very limited	
	Slope	1.00			Slope	1.00
	Depth to bedrock	0.46			Depth to bedrock	0.46
					Droughty	0.05

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SeC:						
Sedgefield-----	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.98 0.94	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Droughty	0.46 0.05
ShA:						
Shady-----	Somewhat limited Flooding	0.60	Not limited		Somewhat limited Flooding	0.60
ShB:						
Shady-----	Somewhat limited Slope	0.50	Not limited		Not limited	
SpF:						
Sipseys-----	Very limited Slope Depth to bedrock Gravel	1.00 0.10 0.02	Very limited Slope	1.00	Very limited Slope Depth to bedrock	1.00 0.10
Sunlight-----	Very limited Slope Depth to bedrock Gravel	1.00 1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty Gravel	1.00 1.00 1.00 0.26
StA:						
Steadman-----	Somewhat limited Flooding Depth to saturated zone	0.60 0.39	Not limited		Somewhat limited Flooding Depth to saturated zone	0.60 0.19
TaF:						
Tallapoosa-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty Large stones	1.00 1.00 0.99 0.16
Fruithurst-----	Very limited Slope Depth to bedrock	1.00 0.10	Very limited Slope	1.00	Very limited Slope Large stones Depth to bedrock	1.00 0.16 0.10
ToA:						
Toccoa-----	Somewhat limited Flooding	0.60	Not limited		Somewhat limited Flooding	0.60
UaE:						
Udorthents-----	Not Rated		Not Rated		Not rated	
Ub:						
Urban land-----	Not Rated		Not Rated		Not rated	
W:						
Water-----	Not Rated		Not Rated		Not rated	

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WaC:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Droughty	0.46 0.05
Helena-----	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.98 0.94	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
WaD:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Helena-----	Very limited Slope Slow water movement Depth to saturated zone	1.00 0.94 0.24	Not limited		Somewhat limited Slope Depth to saturated zone	0.63 0.12
WeD:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Slope Droughty	0.46 0.16 0.04
Rion-----	Very limited Slope	1.00	Not limited		Somewhat limited Slope	0.16
WeE:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Somewhat limited Slope	0.32	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.04
Rion-----	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Slope	1.00
WnC:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Droughty	0.46 0.05
Rion-----	Very limited Slope	1.00	Not limited		Not limited	
WnD:						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Rion-----	Very limited Slope	1.00	Not limited		Somewhat limited Slope	0.63

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WnE:</b>						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Somewhat limited Slope	0.50	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.05
Rion-----	Very limited Slope	1.00	Somewhat limited Slope	0.50	Very limited Slope	1.00
<b>WrC:</b>						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Depth to bedrock Droughty	0.46 0.05
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Not limited		Very limited Depth to bedrock Droughty	1.00 1.00
<b>WrD:</b>						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Not limited		Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Not limited		Very limited Depth to bedrock Droughty Slope	1.00 1.00 0.63
<b>WrE:</b>						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Somewhat limited Slope	0.50	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.05
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Somewhat limited Slope	0.50	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
<b>WrF:</b>						
Wateree-----	Very limited Slope Depth to bedrock	1.00 0.46	Very limited Slope	1.00	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.04
Wake-----	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
<b>WsC:</b>						
Waynesboro-----	Very limited Slope Gravel	1.00 0.49	Not limited		Not limited	
<b>WsD:</b>						
Waynesboro-----	Very limited Slope Gravel	1.00 0.49	Not limited		Somewhat limited Slope	0.63

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Table 9b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Playgrounds		Paths and trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WsE:</b>						
Waynesboro-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Slope	0.82	Slope	1.00
	Gravel	0.49				
<b>WtA:</b>						
Wehadkee-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.60			Flooding	0.60
<b>WyB:</b>						
Wickham-----	Somewhat limited		Not limited		Not limited	
	Slope	0.50				

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Table 10a.--Building Site Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>						
Agricola-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.15	Very limited Slope Depth to bedrock	1.00 0.16
Lloyd-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Musella-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.92
<b>AcF2:</b>						
Agricola-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.15	Very limited Slope Depth to bedrock	1.00 0.16
Lloyd-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Musella-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.92
<b>AeB:</b>						
Allen-----	Not limited		Not limited		Not limited	
<b>AeC:</b>						
Allen-----	Not limited		Not limited		Not limited	
<b>AeD:</b>						
Allen-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
<b>AeE:</b>						
Allen-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
<b>AnB:</b>						
Altavista-----	Somewhat limited Depth to saturated zone	0.24	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.12
<b>ApB:</b>						
Appling-----	Not limited		Not limited		Not limited	
Hard Labor-----	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	

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Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ApC:						
Appling-----	Not limited		Not limited		Not limited	
Hard Labor-----	Not limited		Somewhat limited Depth to saturated zone	0.95	Not limited	
ArB:						
Aragon-----	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Not limited	
ArC:						
Aragon-----	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Not limited	
BrB:						
Braswell-----	Not limited		Not limited		Not limited	
BrC:						
Braswell-----	Not limited		Not limited		Not limited	
BrD:						
Braswell-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
CaA:						
Cartecay-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Flooding	0.99 0.60
CfA:						
Cedarbluff-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Flooding	0.88 0.60
ChA:						
Chewacla-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
CrD:						
Crawfordville-----	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell Depth to soft bedrock	1.00 1.00 0.84	Very limited Depth to saturated zone Depth to bedrock Droughty	1.00 0.84 0.69
Wateree-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock Droughty	0.46 0.08
DAM:						
Dam-----	Not rated		Not rated		Not rated	

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
FrD:						
Fruithurst-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
			Depth to soft bedrock	0.10	Large stones Depth to bedrock	0.16 0.10
Braswell-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37
FrE:						
Fruithurst-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to soft bedrock	0.10	Large stones Depth to bedrock	0.16 0.10
Braswell-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
FtE:						
Fruithurst-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to soft bedrock	0.10	Large stones Depth to bedrock	0.16 0.10
Tallapoosa-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock	1.00
	Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Slope Droughty	1.00 0.99
GrC:						
Grover-----	Not limited		Not limited		Not limited	
Mountain Park-----	Not limited		Somewhat limited Depth to soft bedrock	0.29	Somewhat limited Depth to bedrock	0.29
GrD:						
Grover-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Mountain Park-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
			Depth to soft bedrock	0.29	Depth to bedrock	0.29
GrE:						
Grover-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mountain Park-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to soft bedrock	0.29	Depth to bedrock	0.29
GrF:						
Grover-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mountain Park-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to soft bedrock	0.29	Depth to bedrock	0.29

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
HaB: Helena-----	Very limited Shrink-swell Depth to saturated zone	1.00 0.24	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Somewhat limited Depth to saturated zone	0.12
LdB2: Lloyd-----	Not limited		Not limited		Not limited	
Agricola-----	Not limited		Somewhat limited Depth to soft bedrock	0.15	Somewhat limited Depth to bedrock	0.16
Musella-----	Somewhat limited Depth to soft bedrock	0.50	Very limited Depth to soft bedrock	1.00	Very limited Depth to bedrock Droughty	1.00 0.92
LdC2: Lloyd-----	Not limited		Not limited		Not limited	
Agricola-----	Not limited		Somewhat limited Depth to soft bedrock	0.15	Somewhat limited Depth to bedrock	0.16
Musella-----	Somewhat limited Depth to soft bedrock	0.50	Very limited Depth to soft bedrock	1.00	Very limited Depth to bedrock Droughty	1.00 0.92
LdD2: Lloyd-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
Agricola-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock	0.63 0.15	Somewhat limited Slope Depth to bedrock	0.63 0.16
Musella-----	Somewhat limited Slope Depth to soft bedrock	0.63 0.50	Very limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to bedrock Droughty Slope	1.00 0.92 0.63
MaC2: Madison-----	Not limited		Not limited		Not limited	
PaB2: Pacolet-----	Not limited		Not limited		Not limited	
PaC2: Pacolet-----	Not limited		Not limited		Not limited	
PaD2: Pacolet-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
PeA: Pettyjon-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
Pg: Pits, quarry-----	Not rated		Not rated		Not rated	

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PoF:						
Poindexter-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.46	Very limited Slope Depth to bedrock	1.00 0.46
Wilkes-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.99
PrE:						
Poindexter-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.46	Very limited Slope Depth to bedrock	1.00 0.46
Wilkes-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.99
Rowan-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel Large stones	1.00 0.40 0.01
PwC:						
Poindexter-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock	0.46
Wilkes-----	Somewhat limited Depth to soft bedrock	0.50	Very limited Depth to soft bedrock	1.00	Very limited Depth to bedrock Droughty Large stones	1.00 0.99 0.16
Wynott-----	Very limited Shrink-swell	1.00	Very limited Shrink-swell Depth to soft bedrock	1.00 0.29	Somewhat limited Depth to bedrock	0.29
PwD:						
Poindexter-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock	0.63 0.46	Somewhat limited Slope Depth to bedrock	0.63 0.46
Wilkes-----	Somewhat limited Slope Depth to soft bedrock	0.63 0.50	Very limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to bedrock Droughty Slope	1.00 0.99 0.63
Wynott-----	Very limited Shrink-swell Slope	1.00 0.63	Very limited Shrink-swell Slope Depth to soft bedrock	1.00 0.63 0.29	Somewhat limited Slope Depth to bedrock	0.63 0.29
RnC:						
Rion-----	Not limited		Not limited		Not limited	

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RnD:						
Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
RnE:						
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
RwF:						
Rock outcrop-----	Not rated		Not rated		Not rated	
Wake-----	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to bedrock Droughty Slope	1.00 1.00 1.00
Wateree-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.46	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.05
SeC:						
Sedgefield-----	Very limited Shrink-swell Depth to saturated zone	1.00 0.98	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.75
Wateree-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock Droughty	0.46 0.05
ShA:						
Shady-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Somewhat limited Flooding	0.60
ShB:						
Shady-----	Not limited		Not limited		Not limited	
SpF:						
Sipsey-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.10	Very limited Slope Depth to bedrock	1.00 0.10
Sunlight-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
StA:						
Steadman-----	Very limited Flooding Depth to saturated zone	1.00 0.39	Very limited Flooding Depth to saturated zone	1.00 1.00	Somewhat limited Flooding Depth to saturated zone	0.60 0.19
TaF:						
Tallapoosa-----	Very limited Slope Depth to soft bedrock	1.00 0.50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 0.99

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
TaF: Fruithurst-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.10	Very limited Slope Large stones Depth to bedrock	1.00 0.16 0.10
ToA: Toccoa-----	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.58	Somewhat limited Flooding	0.60
UaE: Udorthents-----	Not rated		Not rated		Not rated	
Ub: Urban land-----	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	
WaC: Wateree-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock Droughty	0.46 0.05
Helena-----	Very limited Shrink-swell Depth to saturated zone	1.00 0.24	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Somewhat limited Depth to saturated zone	0.75
WaD: Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock	0.63 0.46	Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Helena-----	Very limited Shrink-swell Slope Depth to saturated zone	1.00 0.63 0.24	Very limited Depth to saturated zone Shrink-swell Slope	1.00 1.00 0.63	Somewhat limited Slope Depth to saturated zone	0.63 0.12
WeD: Wateree-----	Somewhat limited Slope	0.16	Somewhat limited Depth to hard bedrock Depth to soft bedrock Slope	0.61 0.46 0.16	Somewhat limited Depth to bedrock Slope Droughty	0.46 0.16 0.04
Rion-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
WeE: Wateree-----	Very limited Slope	1.00	Very limited Slope Depth to hard bedrock Depth to soft bedrock	1.00 0.61 0.46	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.04

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WeE:						
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
WnC:						
Wateree-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock Droughty	0.46 0.05
Rion-----	Not limited		Not limited		Not limited	
WnD:						
Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock	0.63 0.46	Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
WnE:						
Wateree-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.46	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.05
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
WrC:						
Wateree-----	Not limited		Somewhat limited Depth to soft bedrock	0.46	Somewhat limited Depth to bedrock Droughty	0.46 0.05
Wake-----	Very limited Depth to hard bedrock	1.00	Very limited Depth to hard bedrock	1.00	Very limited Depth to bedrock Droughty	1.00 1.00
WrD:						
Wateree-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock	0.63 0.46	Somewhat limited Slope Depth to bedrock Droughty	0.63 0.46 0.05
Wake-----	Very limited Depth to hard bedrock Slope	1.00 0.63	Very limited Depth to hard bedrock Slope	1.00 0.63	Very limited Depth to bedrock Droughty Slope	1.00 1.00 0.63
WrE:						
Wateree-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.46	Very limited Slope Depth to bedrock Droughty	1.00 0.46 0.05
Wake-----	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00

Soil Survey of Paulding County, Georgia

Table 10a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WrF:						
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to soft bedrock	0.46	Depth to bedrock	0.46
					Droughty	0.04
Wake-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock	1.00
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
					Droughty	1.00
WsC:						
Waynesboro-----	Not limited		Not limited		Not limited	
WsD:						
Waynesboro-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
WsE:						
Waynesboro-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
WtA:						
Wehadkee-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	0.60
WyB:						
Wickham-----	Not limited		Not limited		Not limited	

# Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Very limited Slope	1.00	Very limited Slope	1.00
	Low strength	0.50	Depth to soft bedrock	0.15
			Unstable excavation walls	0.10
<b>Lloyd-----</b>				
	Very limited Slope	1.00	Very limited Slope	1.00
	Low strength	0.50	Unstable excavation walls	0.10
<b>Musella-----</b>				
	Very limited Slope	1.00	Very limited Depth to soft bedrock	1.00
	Depth to soft bedrock	1.00	Slope	1.00
			Unstable excavation walls	0.10
<b>AcF2:</b>				
Agricola-----	Very limited Slope	1.00	Very limited Slope	1.00
	Low strength	0.50	Depth to soft bedrock	0.15
			Unstable excavation walls	0.10
<b>Lloyd-----</b>				
	Very limited Slope	1.00	Very limited Slope	1.00
	Low strength	0.50	Unstable excavation walls	0.10
<b>Musella-----</b>				
	Very limited Slope	1.00	Very limited Depth to soft bedrock	1.00
	Depth to soft bedrock	1.00	Slope	1.00
			Unstable excavation walls	0.10
<b>AeB:</b>				
Allen-----	Not limited		Somewhat limited Unstable excavation walls	0.10
<b>AeC:</b>				
Allen-----	Not limited		Somewhat limited Unstable excavation walls	0.10
<b>AeD:</b>				
Allen-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
			Unstable excavation walls	0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AeE:				
Allen-----	Very limited Slope	1.00	Very limited Slope Unstable excavation walls	1.00 0.10
AnB:				
Altavista-----	Somewhat limited Depth to saturated zone	0.12	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10
ApB:				
Appling-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
Hard Labor-----	Somewhat limited Low strength	0.50	Somewhat limited Depth to saturated zone Unstable excavation walls Too clayey	0.95 0.10 0.04
ApC:				
Appling-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
Hard Labor-----	Somewhat limited Low strength	0.50	Somewhat limited Depth to saturated zone Unstable excavation walls Too clayey	0.95 0.10 0.04
ArB:				
Aragon-----	Somewhat limited Shrink-swell Low strength	0.50 0.50	Somewhat limited Too clayey Unstable excavation walls	0.97 0.10
ArC:				
Aragon-----	Somewhat limited Shrink-swell Low strength	0.50 0.50	Somewhat limited Too clayey Unstable excavation walls	0.97 0.10
BrB:				
Braswell-----	Very limited Low strength	1.00	Somewhat limited Unstable excavation walls	0.10
BrC:				
Braswell-----	Very limited Low strength	1.00	Somewhat limited Unstable excavation walls	0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
BrD:				
Braswell-----	Very limited		Somewhat limited	
	Low strength	1.00	Slope	0.63
	Slope	0.63	Unstable excavation walls	0.10
CaA:				
Cartecay-----	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	0.99	Unstable excavation walls	1.00
			Flooding	0.60
CfA:				
Cedarbluff-----	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Low strength	1.00	Flooding	0.60
	Depth to saturated zone	0.88	Unstable excavation walls	0.10
ChA:				
Chewacla-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.60
	Low strength	1.00	Unstable excavation walls	0.10
CrD:				
Crawfordville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Shrink-swell	1.00	Depth to soft bedrock	0.84
	Low strength	1.00	Too clayey	0.50
			Unstable excavation walls	0.10
Wateree-----	Not limited		Very limited	
			Unstable excavation walls	1.00
			Depth to soft bedrock	0.46
FrD:				
Fruithurst	Very limited		Somewhat limited	
	Low strength	1.00	Slope	0.37
	Slope	0.37	Depth to soft bedrock	0.10
			Unstable excavation walls	0.10
Braswell-----	Very limited		Somewhat limited	
	Low strength	1.00	Slope	0.37
	Slope	0.37	Unstable excavation walls	0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
FrE:				
Fruithurst-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.10 0.10
Braswell-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Unstable excavation walls	1.00 0.10
FtE:				
Fruithurst-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.10 0.10
Tallapoosa-----	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 1.00 1.00 0.10
GrC:				
Grover-----	Not limited		Very limited Unstable excavation walls	1.00
Mountain Park-----	Not limited		Somewhat limited Depth to soft bedrock Unstable excavation walls	0.29 0.10
GrD:				
Grover-----	Somewhat limited Slope	0.63	Very limited Unstable excavation walls Slope	1.00 0.63
Mountain Park-----	Somewhat limited Slope	0.63	Somewhat limited Slope Depth to soft bedrock Unstable excavation walls	0.63 0.29 0.10
GrE:				
Grover-----	Very limited Slope	1.00	Very limited Slope Unstable excavation walls	1.00 1.00

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GrE: Mountain Park-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.29 0.10
GrF: Grover-----	Very limited Slope	1.00	Very limited Slope Unstable excavation walls	1.00 1.00
Mountain Park-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.29 0.10
HaB: Helena-----	Very limited Shrink-swell Low strength Depth to saturated zone	1.00 1.00 0.12	Very limited Depth to saturated zone Too clayey Unstable excavation walls	1.00 0.50 0.10
LdB2: Lloyd-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
Agricola-----	Somewhat limited Low strength	0.50	Somewhat limited Depth to soft bedrock Unstable excavation walls	0.15 0.10
Musella-----	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock Unstable excavation walls	1.00 0.10
LdC2: Lloyd-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
Agricola-----	Somewhat limited Low strength	0.50	Somewhat limited Depth to soft bedrock Unstable excavation walls	0.15 0.10
Musella-----	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock Unstable excavation walls	1.00 0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
LdD2:				
Lloyd-----	Somewhat limited Slope Low strength	0.63 0.50	Somewhat limited Slope Unstable excavation walls	0.63 0.10
Agricola-----	Somewhat limited Slope Low strength	0.63 0.50	Somewhat limited Slope Depth to soft bedrock Unstable excavation walls	0.63 0.15 0.10
Musella-----	Somewhat limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 0.63 0.10
MaC2:				
Madison-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
PaB2:				
Pacolet-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
PaC2:				
Pacolet-----	Somewhat limited Low strength	0.50	Somewhat limited Unstable excavation walls	0.10
PaD2:				
Pacolet-----	Somewhat limited Slope Low strength	0.63 0.50	Somewhat limited Slope Unstable excavation walls	0.63 0.10
PeA:				
Pettyjon-----	Very limited Flooding Low strength	1.00 1.00	Somewhat limited Flooding Unstable excavation walls	0.60 0.10
PoF:				
Poindexter-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.46 0.10
Wilkes-----	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 1.00 0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>PrE:</b>				
Poindexter-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.46 0.10
Wilkes-----	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 1.00 0.10
Rowan-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Unstable excavation walls	1.00 0.10
<b>PwC:</b>				
Poindexter-----	Very limited Low strength	1.00	Somewhat limited Depth to soft bedrock Unstable excavation walls	0.46 0.10
Wilkes-----	Somewhat limited Depth to soft bedrock	1.00	Very limited Depth to soft bedrock Unstable excavation walls	1.00 0.10
Wynott-----	Very limited Shrink-swell Low strength	1.00 1.00	Somewhat limited Too clayey Depth to soft bedrock Unstable excavation walls	0.50 0.29 0.10
<b>PwD:</b>				
Poindexter-----	Very limited Low strength Slope	1.00 0.63	Somewhat limited Slope Depth to soft bedrock Unstable excavation walls	0.63 0.46 0.10
Wilkes-----	Somewhat limited Depth to soft bedrock Slope	1.00 0.63	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 0.63 0.10
Wynott-----	Very limited Shrink-swell Low strength Slope	1.00 1.00 0.63	Somewhat limited Slope Too clayey Depth to soft bedrock Unstable excavation walls	0.63 0.50 0.29 0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
RnC: Rion-----	Not limited		Somewhat limited Unstable excavation walls	0.10
RnD: Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope Unstable excavation walls	0.63 0.10
RnE: Rion-----	Very limited Slope Low strength	1.00 0.24	Very limited Slope Unstable excavation walls	1.00 0.10
RwF: Rock outcrop-----	Not Rated		Not rated	
Wake-----	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Unstable excavation walls	1.00 1.00 0.50
Wateree-----	Very limited Slope	1.00	Very limited Unstable excavation walls Slope Depth to soft bedrock	1.00 1.00 0.46
SeC: Sedgefield-----	Very limited Shrink-swell Low strength Depth to saturated zone	1.00 1.00 0.75	Very limited Depth to saturated zone Unstable excavation walls Too clayey	1.00 0.10 0.08
Wateree-----	Not limited		Very limited Unstable excavation walls Depth to soft bedrock	1.00 0.46
ShA: Shady-----	Very limited Flooding Low strength	1.00 1.00	Very limited Unstable excavation walls Flooding	1.00 0.60
ShB: Shady-----	Very limited Low strength	1.00	Very limited Unstable excavation walls	1.00

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
SpF:				
Sipsey-----	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.10 0.10
Sunlight-----	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 1.00 1.00 0.10
StA:				
Steadman-----	Very limited Flooding Low strength Depth to saturated zone	1.00 1.00 0.19	Very limited Depth to saturated zone Flooding Too clayey Unstable excavation walls	1.00 0.60 0.12 0.10
TaF:				
Tallapoosa-----	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Depth to soft bedrock Slope Unstable excavation walls	1.00 1.00 1.00 0.10
Fruithurst-----	Very limited Slope Low strength	1.00 1.00	Very limited Slope Depth to soft bedrock Unstable excavation walls	1.00 0.10 0.10
ToA:				
Toccoa-----	Very limited Flooding	1.00	Somewhat limited Flooding Depth to saturated zone Unstable excavation walls	0.60 0.58 0.10
WaC:				
Wateree-----	Not limited		Very limited Unstable excavation walls Depth to soft bedrock	1.00 0.46
Helena-----	Very limited Shrink-swell Low strength Depth to saturated zone	1.00 1.00 0.75	Very limited Depth to saturated zone Too clayey Unstable excavation walls	1.00 0.50 0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WaD:				
Wateree-----	Somewhat limited Slope	0.63	Very limited Unstable excavation walls	1.00
			Slope	0.63
			Depth to soft bedrock	0.46
Helena-----	Very limited Shrink-swell	1.00	Very limited Depth to saturated zone	1.00
	Low strength	1.00	Slope	0.63
	Slope	0.63	Too clayey	0.50
	Depth to saturated zone	0.12	Unstable excavation walls	0.10
WeD:				
Rion-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
			Unstable excavation walls	0.10
Wateree-----	Somewhat limited Slope	0.16	Somewhat limited Depth to hard bedrock	0.61
			Depth to soft bedrock	0.46
			Slope	0.16
			Unstable excavation walls	0.10
WeE:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
			Depth to hard bedrock	0.61
			Depth to soft bedrock	0.46
			Unstable excavation walls	0.10
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00
			Unstable excavation walls	0.10
WnC:				
Wateree-----	Not limited		Very limited Unstable excavation walls	1.00
			Depth to soft bedrock	0.46
Rion-----	Not limited		Somewhat limited Unstable excavation walls	0.10

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WnD:				
Wateree-----	Somewhat limited Slope	0.63	Very limited Unstable excavation walls	1.00
			Slope	0.63
			Depth to soft bedrock	0.46
Rion-----	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63
			Unstable excavation walls	0.10
WnE:				
Rion-----	Very limited Slope	1.00	Very limited Slope	1.00
	Low strength	0.24	Unstable excavation walls	0.10
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
			Unstable excavation walls	1.00
			Depth to soft bedrock	0.46
WrC:				
Wateree-----	Not limited		Very limited Unstable excavation walls	1.00
			Depth to soft bedrock	0.46
Wake-----	Very limited Depth to hard bedrock	1.00	Very limited Depth to hard bedrock	1.00
			Unstable excavation walls	0.50
WrD:				
Wateree-----	Somewhat limited Slope	0.63	Very limited Unstable excavation walls	1.00
			Slope	0.63
			Depth to soft bedrock	0.46
Wake-----	Very limited Depth to hard bedrock	1.00	Very limited Depth to hard bedrock	1.00
	Slope	0.63	Slope	0.63
			Unstable excavation walls	0.50
WrE:				
Wateree-----	Very limited Slope	1.00	Very limited Slope	1.00
			Unstable excavation walls	1.00
			Depth to soft bedrock	0.46

Soil Survey of Paulding County, Georgia

Table 10b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WrE:				
Wake-----	Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
			Unstable excavation walls	0.50
WrF:				
Wateree-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
			Depth to soft bedrock	0.46
			Unstable excavation walls	0.10
Wake-----	Very limited		Very limited	
	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
			Unstable excavation walls	0.50
WsC:				
Waynesboro-----	Somewhat limited		Somewhat limited	
	Low strength	0.50	Too clayey	0.12
			Unstable excavation walls	0.10
WsD:				
Waynesboro-----	Somewhat limited		Somewhat limited	
	Slope	0.63	Slope	0.63
	Low strength	0.50	Too clayey	0.12
			Unstable excavation walls	0.10
WsE:				
Waynesboro-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Low strength	0.50	Too clayey	0.12
			Unstable excavation walls	0.10
WtA:				
Wehadkee-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.60
			Unstable excavation walls	0.10
WyB:				
Wickham-----	Not limited		Somewhat limited	
			Unstable excavation walls	0.10

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Lloyd-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Musella-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
			Slope	1.00
			Seepage	0.50
<b>AcF2:</b>				
Agricola-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Lloyd-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Musella-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
			Slope	1.00
			Seepage	0.50
<b>AeB:</b>				
Allen-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.46	Seepage	0.53
			Slope	0.32
<b>AeC:</b>				
Allen-----	Somewhat limited		Very limited	
	Slow water movement	0.46	Slope	1.00
			Seepage	0.53
<b>AeD:</b>				
Allen-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.46	Seepage	0.53
<b>AeE:</b>				
Allen-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.46	Seepage	0.53

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AnB:				
Altavista-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.68	Seepage	0.32
			Slope	0.32
ApB:				
Appling-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32
Hard Labor-----	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Seepage	0.50
	Slow water movement	1.00	Slope	0.32
ApC:				
Appling-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Hard Labor-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	1.00	Slope	1.00
ArB:				
Aragon-----	Very limited		Somewhat limited	
	Slow water movement	1.00	Seepage	0.50
			Slope	0.32
ArC:				
Aragon-----	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
			Seepage	0.50
BrB:				
Braswell-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.68
			Slope	0.32
BrC:				
Braswell-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.68
BrD:				
Braswell-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.68
CaA:				
Cartecay-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage, bottom layer	1.00	Depth to saturated zone	1.00

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>CfA:</b>				
Cedarbluff-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Seepage	0.50
<b>ChA:</b>				
Chewacla-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.92
<b>CrD:</b>				
Crawfordville-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Slope	1.00
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
			Slope	1.00
<b>DAM:</b>				
Dam-----	Not rated		Not rated	
<b>FrD:</b>				
Fruithurst-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	0.50	Slope	1.00
	Slope	0.37	Seepage	0.50
Braswell-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
	Slope	0.37	Seepage	0.68
<b>FrE:</b>				
Fruithurst-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Braswell-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.68
<b>FtE:</b>				
Fruithurst-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>FtE:</b>				
Tallapoosa-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
			Seepage	0.50
<b>GrC:</b>				
Grover-----	Somewhat limited		Very limited	
	Slow water movement	0.32	Seepage	1.00
			Slope	1.00
Mountain Park-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	0.32	Slope	0.92
			Seepage	0.68
<b>GrD:</b>				
Grover-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.32	Seepage	1.00
Mountain Park-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	0.63	Slope	1.00
	Slow water movement	0.32	Seepage	0.68
<b>GrE:</b>				
Grover-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.32	Seepage	1.00
Mountain Park-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.32	Seepage	0.68
<b>GrF:</b>				
Grover-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.32	Seepage	1.00
Mountain Park-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.32	Seepage	0.68
<b>HaB:</b>				
Helena-----	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.64
	Slow water movement	1.00	Seepage	0.32
			Slope	0.32
<b>LdB2:</b>				
Lloyd-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
LdB2:				
Agricola-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32
Musella-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
			Seepage	0.50
			Slope	0.32
LdC2:				
Lloyd-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Agricola-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Musella-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
			Slope	1.00
			Seepage	0.50
LdD2:				
Lloyd-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Agricola-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Musella-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	0.63	Slope	1.00
			Seepage	0.50
MaC2:				
Madison-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
PaB2:				
Pacolet-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32
PaC2:				
Pacolet-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PaD2: Pacolet-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
PeA: Pettyjon-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Slow water movement	0.50	Seepage	0.50
Pg: Pits, quarry-----	Not rated		Not rated	
PoF: Poindexter-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Wilkes-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
PrE: Poindexter-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	1.00
Wilkes-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
Rowan-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.68
	Depth to bedrock	0.05		
PwC: Poindexter-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Wilkes-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
			Slope	1.00
Wynott-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slow water movement	1.00	Slope	1.00

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PwD:				
Poindexter-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	0.63	bedrock	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
Wilkes-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	0.63	bedrock	
			Slope	1.00
Wynott-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slow water movement	1.00	bedrock	
	Slope	0.63	Slope	1.00
RnC:				
Rion-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
RnD:				
Rion-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
RnE:				
Rion-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
RwF:				
Rock outcrop-----	Not rated		Not rated	
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Slope	1.00
	Slope	1.00		
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Seepage	1.00
	Slope	1.00	Slope	1.00
SeC:				
Sedgefield-----	Very limited		Very limited	
	Depth to saturated	1.00	Depth to saturated	1.00
	zone		zone	
	Slow water movement	1.00	Slope	0.92
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Seepage	1.00
			Slope	0.92

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ShA:				
Shady-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	0.50		
ShB:				
Shady-----	Very limited		Very limited	
	Seepage, bottom layer	1.00	Seepage	1.00
	Slow water movement	0.50	Slope	0.32
SpF:				
Sipsey-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
Sunlight-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
			Seepage	1.00
StA:				
Steadman-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
TaF:				
Tallapoosa-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
			Seepage	0.50
Fruithurst-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
ToA:				
Toccoa-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.64
UaE:				
Udorthents-----	Not rated		Not rated	
Ub:				
Urban land-----	Not rated		Not rated	
W:				
Water-----	Not rated		Not rated	

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WaC:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Seepage	1.00
			Slope	1.00
Helena-----	Very limited		Very limited	
	Depth to saturated	1.00	Slope	1.00
	zone		Depth to saturated	0.64
	Slow water movement	1.00	zone	
			Seepage	0.32
<b>WaD:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Slope	1.00
	Slope	0.63	Seepage	1.00
Helena-----	Very limited		Very limited	
	Depth to saturated	1.00	Slope	1.00
	zone		Depth to saturated	0.64
	Slow water movement	1.00	zone	
	Slope	0.63	Seepage	0.32
<b>WeD:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Seepage	1.00
	Slope	0.16	Slope	1.00
			Depth to hard	0.61
			bedrock	
Rion-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Seepage	1.00
	Slope	0.16	Slope	1.00
<b>WeE:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
	Seepage, bottom	1.00	Slope	1.00
	layer		Seepage	1.00
			Depth to hard	0.61
			bedrock	
Rion-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	1.00
<b>WnC:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Seepage, bottom	1.00	bedrock	
	layer		Seepage	1.00
			Slope	1.00
Rion-----	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WnD:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Slope	0.63	Seepage	1.00
Rion-----	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
<b>WnE:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
Rion-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.50	Seepage	0.50
<b>WrC:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
			Slope	1.00
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Seepage, bottom layer	1.00	Slope	1.00
<b>WrD:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Slope	0.63	Seepage	1.00
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Seepage, bottom layer	1.00	Slope	1.00
	Slope	0.63		
<b>WrE:</b>				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft bedrock	1.00
	Slope	1.00	Slope	1.00
	Seepage, bottom layer	1.00	Seepage	1.00
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard bedrock	1.00
	Slope	1.00	Slope	1.00
	Seepage, bottom layer	1.00		

Soil Survey of Paulding County, Georgia

Table 11.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WrF:				
Wateree-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to soft	1.00
	Slope	1.00	bedrock	
	Seepage, bottom	1.00	Slope	1.00
	layer		Seepage	1.00
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard	1.00
	Slope	1.00	bedrock	
	Seepage, bottom	1.00	Slope	1.00
	layer			
WsC:				
Waynesboro-----	Somewhat limited		Very limited	
	Slow water movement	0.68	Slope	1.00
			Seepage	0.32
WsD:				
Waynesboro-----	Somewhat limited		Very limited	
	Slow water movement	0.68	Slope	1.00
	Slope	0.63	Seepage	0.32
WsE:				
Waynesboro-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Slow water movement	0.68	Seepage	0.32
WtA:				
Wehadkee-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated	1.00	Depth to saturated	1.00
	zone		zone	
	Slow water movement	0.50	Seepage	0.92
WyB:				
Wickham-----	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.32

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. For potential source of sand, the ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand. For potential sources of roadfill or topsoil, the numbers in the value columns also range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>						
Agricola-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.50	Too clayey	0.00
			Low strength	0.50	Rock fragments	0.50
Lloyd-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.00
					Rock fragments	0.50
Musella-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.50	Slope	0.00
					Rock fragments	0.18
<b>AcF2:</b>						
Agricola-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Too clayey	0.00
			Low strength	0.50	Depth to bedrock	0.84
Lloyd-----	Poor		Poor		Poor	
	Thickest layer	0.00	Slope	0.00	Slope	0.00
	Bottom layer	0.00			Too clayey	0.00
Musella-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.00	Slope	0.00
					Rock fragments	0.18
<b>AeB:</b>						
Allen-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.39
	Bottom layer	0.00			Too acid	0.76
					Rock fragments	0.98
<b>AeC:</b>						
Allen-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.39
	Bottom layer	0.00			Too acid	0.76
					Rock fragments	0.98
<b>AeD:</b>						
Allen-----	Poor		Good		Fair	
	Thickest layer	0.00			Slope	0.37
	Bottom layer	0.00			Too clayey	0.39
					Too acid	0.76

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeE:						
Allen-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.39
					Too acid	0.76
AnB:						
Altavista-----	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.62	Too clayey	0.58
	Bottom layer	0.00			Wetness	0.62
ApB:						
Appling-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00				
Hard Labor-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00				
ApC:						
Appling-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00				
Hard Labor-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00				
ArB:						
Aragon-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00			Too acid	0.88
ArC:						
Aragon-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00			Too acid	0.88
BrB:						
Braswell-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.01
	Bottom layer	0.00			Too acid	0.98
BrC:						
Braswell-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.01
	Bottom layer	0.00			Too acid	0.98
BrD:						
Braswell-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.01
	Bottom layer	0.00			Slope	0.37
					Too acid	0.98
CaA:						
Cartecay-----	Poor		Fair		Fair	
	Thickest layer	0.00	Wetness	0.01	Wetness	0.01
	Bottom layer	0.00			Hard to reclaim (rock fragments)	0.05

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CfA:						
Cedarbluff-----	Poor		Poor		Poor	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.00
	Bottom layer	0.00	Wetness	0.07	Wetness	0.07
					Too acid	0.92
ChA:						
Chewacla-----	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00			Too clayey	0.35
CrD:						
Crawfordville----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Wetness	0.00	Wetness	0.00
			Low strength	0.00	Depth to bedrock	0.16
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Too acid	0.98
DAM:						
Dam-----	Not Rated		Not rated		Not Rated	
FrD:						
Fruithurst-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Slope	0.63
					Rock fragments	0.64
Braswell-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.01
	Bottom layer	0.00			Slope	0.63
					Too acid	0.98
FrE:						
Fruithurst-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Low strength	0.00	Too clayey	0.00
			Slope	0.50	Rock fragments	0.64
Braswell-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.01
					Too acid	0.98
FtE:						
Fruithurst-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Low strength	0.00	Too clayey	0.00
			Slope	0.50	Rock fragments	0.64
Tallapoosa-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.50	Slope	0.00
					Too acid	0.76

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GrC:						
Grover-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00			Rock fragments	0.60
Mountain Park----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.58
	Bottom layer	0.00			Depth to bedrock	0.71
GrD:						
Grover-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00			Slope	0.37
Mountain Park----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.37
	Bottom layer	0.00			Too clayey	0.58
					Depth to bedrock	0.71
GrE:						
Grover-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.35
Mountain Park----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.50	Too clayey	0.58
					Depth to bedrock	0.71
GrF:						
Grover-----	Poor		Poor		Poor	
	Thickest layer	0.00	Slope	0.00	Slope	0.00
	Bottom layer	0.00			Too clayey	0.35
Mountain Park----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Too clayey	0.58
					Depth to bedrock	0.71
HaB:						
Helena-----	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.62	Too clayey	0.00
	Bottom layer	0.00	Shrink-swell	0.91	Wetness	0.62
					Too acid	0.88
LdB2:						
Lloyd-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00				
Agricola-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Depth to bedrock	0.84
					Rock fragments	0.94
Musella-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Rock fragments	0.18

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LdC2:						
Lloyd-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00				
Agricola-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Depth to bedrock	0.84
					Rock fragments	0.94
Musella-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Rock fragments	0.18
LdD2:						
Lloyd-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Slope	0.37
Agricola-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Slope	0.37
					Depth to bedrock	0.84
Musella-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Rock fragments	0.18
					Slope	0.37
MaC2:						
Madison-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00				
PaB2:						
Pacolet-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Too acid	0.98
PaC2:						
Pacolet-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Too acid	0.98
PaD2:						
Pacolet-----	Poor		Good		Poor	
	Thickest layer	0.00			Too clayey	0.00
	Bottom layer	0.00			Slope	0.37
					Too acid	0.98
PeA:						
Pettyjon-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.43
	Bottom layer	0.00				
Pg:						
Pits, quarry-----	Not Rated		Not rated		Not Rated	

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PoF:						
Poindexter-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Too clayey	0.00
			Low strength	0.00	Depth to bedrock	0.54
Wilkes-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.00	Slope	0.00
					Rock fragments	0.69
PrE:						
Poindexter-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Low strength	0.00	Too clayey	0.00
			Slope	0.82	Depth to bedrock	0.54
Wilkes-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.82	Slope	0.00
					Rock fragments	0.89
Rowan-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.82	Slope	0.00
	Bottom layer	0.00			Too clayey	0.00
					Rock fragments	0.98
PwC:						
Poindexter-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Depth to bedrock	0.54
Wilkes-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00				
Wynott-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Depth to bedrock	0.71
			Shrink-swell	0.97		
PwD:						
Poindexter-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Slope	0.37
					Depth to bedrock	0.54
Wilkes-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Slope	0.37
					Rock fragments	0.96
Wynott-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.00	Slope	0.37
			Shrink-swell	0.97	Depth to bedrock	0.71
RnC:						
Rion-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00				

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RnD:						
Rion-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00			Slope	0.37
RnE:						
Rion-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.35
RwF:						
Rock outcrop-----	Not Rated		Not rated		Not Rated	
Wake-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Slope	0.00
					Too sandy	0.01
Wateree-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00			Depth to bedrock	0.54
					Too acid	0.98
SeC:						
Sedgefield-----	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.14	Too clayey	0.00
	Bottom layer	0.00			Wetness	0.14
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Too acid	0.98
ShA:						
Shady-----	Poor		Poor		Fair	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.43
	Bottom layer	0.00				
ShB:						
Shady-----	Poor		Poor		Fair	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.43
	Bottom layer	0.00				
SpF:						
Sipsey-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Too clayey	0.43
					Depth to bedrock	0.90
Sunlight-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.00	Slope	0.00
					Rock fragments	0.00
StA:						
Steadman-----	Poor		Poor		Fair	
	Thickest layer	0.00	Low strength	0.00	Too clayey	0.15
	Bottom layer	0.00	Wetness	0.53	Wetness	0.53

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
TaF:						
Tallapoosa-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.00	Slope	0.00
					Rock fragments	0.76
Fruithurst-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Too clayey	0.00
			Low strength	0.00	Rock fragments	0.64
ToA:						
Toccoa-----	Poor		Good		Good	
	Thickest layer	0.00				
	Bottom layer	0.00				
UaE:						
Udorthents-----	Not Rated		Not rated		Not Rated	
Ub:						
Urban land-----	Not Rated		Not rated		Not Rated	
W:						
Water-----	Not Rated		Not rated		Not Rated	
WaC:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Too acid	0.98
Helena-----	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.62	Too clayey	0.00
	Bottom layer	0.00	Shrink-swell	0.91	Wetness	0.62
					Too acid	0.88
WaD:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.37
	Bottom layer	0.00			Depth to bedrock	0.54
					Wetness	0.62
Helena-----	Poor		Fair		Poor	
	Thickest layer	0.00	Wetness	0.62	Too clayey	0.00
	Bottom layer	0.00	Shrink-swell	0.91	Slope	0.37
					Wetness	0.62
WeD:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Slope	0.84
					Too acid	0.98
Rion-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.58
	Bottom layer	0.00			Slope	0.84
WeE:						
Wateree-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.68	Depth to bedrock	0.54
					Too acid	0.98

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WeE:						
Rion-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.68	Slope	0.00
	Bottom layer	0.00			Too clayey	0.58
WnC:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Too acid	0.98
Rion-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00				
WnD:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.37
	Bottom layer	0.00			Depth to bedrock	0.54
					Too acid	0.98
Rion-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.35
	Bottom layer	0.00			Slope	0.37
WnE:						
Wateree-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.50	Depth to bedrock	0.54
					Too acid	0.98
Rion-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.50	Slope	0.00
	Bottom layer	0.00			Too clayey	0.35
WrC:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.54
	Bottom layer	0.00			Too acid	0.98
Wake-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Too sandy	0.01
					Too acid	0.98
WrD:						
Wateree-----	Poor		Poor		Fair	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.37
	Bottom layer	0.00			Depth to bedrock	0.54
					Too acid	0.98
Rion-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00			Too sandy	0.01
					Slope	0.37
WrE:						
Wateree-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.50	Depth to bedrock	0.54
					Too acid	0.98

Soil Survey of Paulding County, Georgia

Table 12.--Construction Materials--Continued

Map symbol and soil name	Sand source		Roadfill source		Topsoil source	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WrE: Wake-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.50	Slope	0.00
					Too sandy	0.01
WrF: Wateree-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Slope	0.00
	Bottom layer	0.00	Slope	0.00	Depth to bedrock	0.54
					Too acid	0.98
Wake-----	Poor		Poor		Poor	
	Thickest layer	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
	Bottom layer	0.00	Slope	0.00	Slope	0.00
					Too sandy	0.01
WsC: Waynesboro-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00			Too acid	0.88
WsD: Waynesboro-----	Poor		Fair		Poor	
	Thickest layer	0.00	Low strength	0.50	Too clayey	0.00
	Bottom layer	0.00			Slope	0.37
					Too acid	0.88
WsE: Waynesboro-----	Poor		Fair		Poor	
	Thickest layer	0.00	Slope	0.18	Too clayey	0.00
	Bottom layer	0.00	Low strength	0.50	Slope	0.00
					Too acid	0.88
WtA: Wehadkee-----	Poor		Poor		Poor	
	Thickest layer	0.00	Wetness	0.00	Wetness	0.00
	Bottom layer	0.00				
WyB: Wickham-----	Poor		Good		Fair	
	Thickest layer	0.00			Too clayey	0.58
	Bottom layer	0.00				

Soil Survey of Paulding County, Georgia

Table 13.--Water Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>AaE2:</b>				
Agricola-----	Somewhat limited		Somewhat limited	
	Slope	0.77	Thin layer	0.74
	Seepage	0.70		
	Depth to bedrock	0.05		
Lloyd-----	Somewhat limited		Not limited	
	Slope	0.77		
	Seepage	0.70		
Musella-----	Somewhat limited		Very limited	
	Slope	0.77	Thin layer	1.00
	Depth to bedrock	0.61		
<b>AcF2:</b>				
Agricola-----	Very limited		Somewhat limited	
	Slope	1.00	Thin layer	0.74
	Seepage	0.70		
	Depth to bedrock	0.05		
Lloyd-----	Very limited		Not limited	
	Slope	1.00		
	Seepage	0.70		
Musella-----	Very limited		Very limited	
	Slope	1.00	Thin layer	1.00
	Depth to bedrock	0.61		
<b>AeB:</b>				
Allen-----	Somewhat limited		Not limited	
	Seepage	0.72		
<b>AeC:</b>				
Allen-----	Somewhat limited		Not limited	
	Seepage	0.72		
<b>AeD:</b>				
Allen-----	Somewhat limited		Not limited	
	Seepage	0.72		
	Slope	0.04		
<b>AeE:</b>				
Allen-----	Somewhat limited		Not limited	
	Slope	0.77		
	Seepage	0.72		
<b>AnB:</b>				
Altavista-----	Somewhat limited		Somewhat limited	
	Seepage	0.57	Depth to saturated zone	0.99
			Piping	0.42

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
ApB:				
Appling-----	Somewhat limited Seepage	0.70	Not limited	
Hard Labor-----	Somewhat limited Seepage	0.01	Somewhat limited Depth to saturated zone	0.46
ApC:				
Appling-----	Somewhat limited Seepage	0.70	Not limited	
Hard Labor-----	Somewhat limited Seepage	0.01	Somewhat limited Depth to saturated zone	0.46
ArB:				
Aragon-----	Somewhat limited Seepage	0.03	Not limited	
ArC:				
Aragon-----	Somewhat limited Seepage	0.03	Not limited	
BrB:				
Braswell-----	Somewhat limited Seepage	0.81	Somewhat limited Piping	0.89
BrC:				
Braswell-----	Somewhat limited Seepage	0.81	Somewhat limited Piping	0.89
BrD:				
Braswell-----	Somewhat limited Seepage Slope	0.81 0.04	Somewhat limited Piping	0.89
CaA:				
Cartecay-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00
CfA:				
Cedarbluff-----	Not limited		Very limited Depth to saturated zone	1.00
ChA:				
Chewacla-----	Somewhat limited Seepage	0.95	Very limited Depth to saturated zone	1.00
CrD:				
Crawfordville-----	Somewhat limited Depth to bedrock	0.26	Very limited Depth to saturated zone Thin layer	1.00 0.96

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
CrD:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
DAM:				
Dam-----	Not Rated		Not rated	
FrD:				
Fruithurst-----	Somewhat limited		Somewhat limited	
	Seepage	0.70	Thin layer	0.70
	Depth to bedrock	0.04		
	Slope	0.01		
Braswell-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Piping	0.89
	Slope	0.01		
FrE:				
Fruithurst-----	Somewhat limited		Somewhat limited	
	Slope	0.77	Thin layer	0.70
	Seepage	0.70		
	Depth to bedrock	0.04		
Braswell-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Piping	0.89
	Slope	0.77		
FtE:				
Fruithurst-----	Somewhat limited		Somewhat limited	
	Slope	0.77	Thin layer	0.70
	Seepage	0.70		
	Depth to bedrock	0.04		
Tallapoosa-----	Somewhat limited		Very limited	
	Slope	0.77	Thin layer	1.00
	Depth to bedrock	0.66	Piping	0.85
GrC:				
Grover-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Seepage	0.18
Mountain Park-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Thin layer	0.81
	Depth to bedrock	0.08		
GrD:				
Grover-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Seepage	0.08
	Slope	0.04		
Mountain Park-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Thin layer	0.81
	Depth to bedrock	0.08		
	Slope	0.04		
GrE:				
Grover-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Seepage	0.03
	Slope	0.77		

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
GrE:				
Mountain Park-----	Somewhat limited		Somewhat limited	
	Seepage	0.81	Thin layer	0.81
	Slope	0.77		
	Depth to bedrock	0.08		
GrF:				
Grover-----	Very limited		Somewhat limited	
	Slope	1.00	Seepage	0.05
	Seepage	0.81		
Mountain Park-----	Very limited		Somewhat limited	
	Slope	1.00	Thin layer	0.81
	Seepage	0.81		
	Depth to bedrock	0.08		
HaB:				
Helena-----	Somewhat limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	0.99
LdB2:				
Lloyd-----	Somewhat limited		Not limited	
	Seepage	0.70		
Agricola-----	Somewhat limited		Somewhat limited	
	Seepage	0.70	Thin layer	0.74
	Depth to bedrock	0.05		
Musella-----	Somewhat limited		Very limited	
	Depth to bedrock	0.61	Thin layer	1.00
LdC2:				
Lloyd-----	Somewhat limited		Not limited	
	Seepage	0.70		
Agricola-----	Somewhat limited		Somewhat limited	
	Seepage	0.70	Thin layer	0.74
	Depth to bedrock	0.05		
Musella-----	Somewhat limited		Very limited	
	Depth to bedrock	0.61	Thin layer	1.00
LdD2:				
Lloyd-----	Somewhat limited		Not limited	
	Seepage	0.70		
	Slope	0.04		
Agricola-----	Somewhat limited		Somewhat limited	
	Seepage	0.70	Thin layer	0.74
	Depth to bedrock	0.05		
	Slope	0.04		
Musella-----	Somewhat limited		Very limited	
	Depth to bedrock	0.61	Thin layer	1.00
	Slope	0.04		
MaC2:				
Madison-----	Somewhat limited		Not limited	
	Seepage	0.70		

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PaB2: Pacolet-----	Somewhat limited Seepage	0.70	Not limited	
PaC2: Pacolet-----	Somewhat limited Seepage	0.70	Not limited	
PaD2: Pacolet-----	Somewhat limited Seepage Slope	0.70 0.04	Not limited	
PeA: Pettyjon-----	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.72
Pg: Pits, quarry-----	Not Rated		Not rated	
PoF: Poindexter-----	Very limited Slope Seepage Depth to bedrock	1.00 0.70 0.11	Somewhat limited Thin layer	0.86
Wilkes-----	Very limited Slope Depth to bedrock	1.00 0.69	Very limited Thin layer	1.00
PrE: Poindexter-----	Somewhat limited Seepage Slope Depth to bedrock	0.70 0.56 0.11	Somewhat limited Thin layer	0.86
Wilkes-----	Somewhat limited Depth to bedrock Slope	0.69 0.56	Very limited Thin layer	1.00
Rowan-----	Somewhat limited Seepage Slope	0.70 0.56	Not limited	
PwC: Poindexter-----	Somewhat limited Seepage Depth to bedrock	0.70 0.11	Somewhat limited Thin layer	0.86
Wilkes-----	Somewhat limited Depth to bedrock	0.69	Very limited Thin layer	1.00
Wynott-----	Somewhat limited Depth to bedrock Seepage	0.08 0.05	Somewhat limited Thin layer	0.81
PwD: Poindexter-----	Somewhat limited Seepage Depth to bedrock Slope	0.70 0.11 0.04	Somewhat limited Thin layer	0.86

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PwD:				
Wilkes-----	Somewhat limited		Very limited	
	Depth to bedrock	0.69	Thin layer	1.00
	Slope	0.04		
Wynott-----	Somewhat limited		Somewhat limited	
	Depth to bedrock	0.08	Thin layer	0.81
	Seepage	0.05		
	Slope	0.04		
RnC:				
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		
RnD:				
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		
	Slope	0.04		
RnE:				
Rion-----	Somewhat limited		Not limited	
	Slope	0.77		
	Seepage	0.70		
RwF:				
Rock outcrop-----	Not Rated		Not rated	
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00
	Slope	0.23	Seepage	0.70
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Slope	0.23		
	Depth to bedrock	0.11		
SeC:				
Sedgefield-----	Somewhat limited		Very limited	
	Seepage	0.05	Depth to saturated zone	1.00
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
ShA:				
Shady-----	Very limited		Somewhat limited	
	Seepage	1.00	Piping	0.12
ShB:				
Shady-----	Very limited		Somewhat limited	
	Seepage	1.00	Piping	0.12
SpF:				
Sipsey-----	Very limited		Somewhat limited	
	Slope	1.00	Thin layer	0.70
	Seepage	0.70	Piping	0.36
	Depth to bedrock	0.04		

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
SpF:				
Sunlight-----	Very limited		Very limited	
	Slope	1.00	Thin layer	1.00
	Seepage	1.00	Seepage	0.40
	Depth to bedrock	0.66		
StA:				
Steadman-----	Somewhat limited		Very limited	
	Seepage	0.70	Depth to saturated zone	1.00
TaF:				
Tallapoosa-----	Very limited		Very limited	
	Slope	1.00	Thin layer	1.00
	Depth to bedrock	0.66	Piping	0.85
Fruithurst-----	Very limited		Somewhat limited	
	Slope	1.00	Thin layer	0.70
	Seepage	0.70		
	Depth to bedrock	0.04		
ToA:				
Toccoa-----	Very limited		Not limited	
	Seepage	1.00		
UaE:				
Udorthents-----	Not Rated		Not rated	
Ub:				
Urban land-----	Not Rated		Not rated	
W:				
Water-----	Not Rated		Not rated	
WaC:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
Helena-----	Somewhat limited		Very limited	
	Seepage	0.05	Depth to saturated zone	0.99
WaD:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
	Slope	0.04		
Helena-----	Somewhat limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	0.99
	Slope	0.04		
WeD:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.16		
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>WeE:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Slope	0.68		
	Depth to bedrock	0.16		
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		
	Slope	0.68		
<b>WnC:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		
<b>WnD:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
	Slope	0.04		
Rion-----	Somewhat limited		Not limited	
	Seepage	0.70		
	Slope	0.04		
<b>WnE:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Slope	0.77		
	Depth to bedrock	0.11		
Rion-----	Somewhat limited		Not limited	
	Slope	0.77		
	Seepage	0.70		
<b>WrC:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00
			Seepage	0.70
<b>WrD:</b>				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Depth to bedrock	0.11		
	Slope	0.04		
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00
	Slope	0.04	Seepage	0.70

Soil Survey of Paulding County, Georgia

Table 13.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WrE:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Slope	0.77		
	Depth to bedrock	0.11		
Wake-----	Very limited		Very limited	
	Depth to bedrock	1.00	Thin layer	1.00
	Slope	0.77	Seepage	0.70
WrF:				
Wateree-----	Very limited		Somewhat limited	
	Seepage	1.00	Thin layer	0.86
	Slope	1.00		
	Depth to bedrock	0.11		
Wake-----	Very limited		Very limited	
	Slope	1.00	Thin layer	1.00
	Depth to bedrock	1.00	Seepage	0.80
WsC:				
Waynesboro-----	Somewhat limited		Somewhat limited	
	Seepage	0.57	Hard to pack	0.53
WsD:				
Waynesboro-----	Somewhat limited		Somewhat limited	
	Seepage	0.57	Hard to pack	0.53
	Slope	0.04		
WsE:				
Waynesboro-----	Somewhat limited		Somewhat limited	
	Slope	0.92	Hard to pack	0.53
	Seepage	0.57		
WtA:				
Wehadkee-----	Somewhat limited		Very limited	
	Seepage	0.95	Depth to saturated zone	1.00
			Piping	0.22
WyB:				
Wickham-----	Somewhat limited		Not limited	
	Seepage	0.70		

Table 14.--Engineering Properties

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
AaE2: Agricola-----	0-5	Sandy loam	SC, SC-SM	A-2-6, A-6, A-4, A-2, A-2-4	0	0-5	70-100	69-100	51-79	25-41	26-35	9-13
	5-9	Sandy loam	SC, SC-SM	A-6, A-2-6, A-4, A-2, A-2-4	0	0-14	76-100	75-100	54-78	26-40	24-32	9-13
	9-24	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-6, A-7	0	0-15	74-100	73-100	62-97	48-77	36-49	19-28
	24-34	Cobbly sandy clay loam, clay loam, loam	CL, SC-SM, SC	A-6, A-7-6, A-7	0	0-29	90-100	90-100	70-94	39-60	32-49	16-28
	34-42	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Lloyd-----	0-4	Sandy loam	SC, SM	A-2-4, A-4	0	0-5	70-100	69-100	47-82	22-45	19-35	3-13
	4-25	Clay loam, clay, silty clay	CL	A-6, A-7-6, A-7	0	0-15	74-100	73-100	62-100	48-91	37-61	21-39
	25-40	Sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	87-100	87-100	72-100	39-65	29-49	13-28
	40-48	Sandy loam, sandy clay loam	SC-SM	A-4, A-6	0	0	65-100	64-100	47-94	23-56	20-40	6-21
	48-80	Sandy loam, loamy sand	SC-SM, SM	A-4	0	0	65-100	64-100	46-82	22-45	16-27	2-10
Musella-----	0-5	Sandy loam	SC, SC-SM	A-2-6, A-4, A-6, A-2, A-2-4	0	0-6	84-100	83-100	57-78	26-40	21-34	6-13
	5-16	Gravelly sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-7-6, A-7	0	0-14	75-100	74-100	60-100	33-65	29-49	13-28
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
AcF2: Agricola-----	0-5	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-2, A-4	0	0-14	76-100	75-100	55-79	27-41	26-35	9-13
	5-9	Sandy loam	SC, SC-SM	A-6, A-2-6, A-4, A-2, A-2-4	0	0	85-100	84-100	61-78	30-40	24-32	9-13
	9-24	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-6, A-7	0	0-12	43-100	41-100	34-97	27-78	36-49	19-28
	24-34	Cobbly sandy clay loam, clay loam, loam	SC, SC-SM, CL	A-6, A-7-6, A-7	0	0-29	81-100	80-100	63-94	35-60	32-49	16-28
	34-42	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
AcF2:												
Lloyd-----	0-4	Sandy loam	SC, SM	A-2-4, A-4	0	0-14	76-100	75-100	51-82	24-45	19-35	3-13
	4-25	Clay loam, clay, silty clay	CL	A-6, A-7-6, A-7	0	0-12	43-100	41-100	34-100	27-91	37-61	21-39
	25-40	Sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	84-100	84-100	70-100	38-65	29-49	13-28
	40-48	Sandy loam, sandy clay loam	SC-SM	A-4, A-6	0	0	65-100	64-100	47-94	23-56	20-40	6-21
	48-80	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2, A-2-4	0	0	100	100	72-82	35-45	16-27	2-10
Musella-----	0-5	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-2, A-4	0	0-14	76-100	75-100	51-79	23-41	21-35	6-13
	5-16	Gravelly sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-7-6, A-7	0	0-3	55-100	53-100	43-100	23-65	29-49	13-28
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
AeB:												
Allen-----	0-5	Loam	CL, SC-SM, SC, CL-ML, SM, ML	A-4, A-5, A-2-5, A-7-6, A-2, A-6, A-2-6, A-7, A-2-7, A-2-4	0	0-27	62-100	23-100	19-97	13-73	19-41	3-17
	5-14	Clay loam, loam	CL, CL-ML, SC-SM, SC, SM, ML	A-6, A-2-7, A-5, A-7-6, A-2-5, A-2-4, A-7, A-2, A-2-6, A-4	0	0-20	78-100	57-100	40-93	29-73	19-43	3-21
	14-51	Clay loam, loam	CL, SC-SM, CL-ML, SC	A-6, A-4, A-7-6, A-2-4, A-2-7, A-7, A-5, A-2-5, A-2, A-2-6	0	0-19	79-100	59-100	42-96	31-77	21-45	6-25
	51-60	Clay, clay loam	CL, CH, SC-SM, SC	A-7-6, A-6, A-7	0	0-19	79-100	59-100	47-98	36-80	35-53	18-32

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	In				Pct	Pct					Pct	
AeC: Allen-----	0-5	Loam	CL, SC-SM, SC, CL-ML, SM, ML	A-4, A-5, A-2-5, A-7-6, A-2, A-6, A-2-6, A-7, A-2-7, A-2-4	0	0-27	62-100	23-100	19-97	13-73	19-41	3-17
	5-14	Clay loam, loam	CL, CL-ML, SC-SM, SC, SM, ML	A-6, A-2-7, A-5, A-7-6, A-2-5, A-2-4, A-7, A-2, A-2-6, A-4	0	0-20	78-100	57-100	40-93	29-73	19-43	3-21
	14-51	Clay loam, loam	CL, SC-SM, CL-ML, SC	A-6, A-4, A-7-6, A-2-4, A-2-7, A-7, A-5, A-2-5, A-2, A-2-6	0	0-19	79-100	59-100	42-96	31-77	21-45	6-25
	51-60	Clay, clay loam	CL, GC-GM, CH, GC, SC, SC-SM	A-7-6, A-6, A-7	0	0-19	79-100	59-100	47-98	36-80	35-53	18-32
AeD: Allen-----	0-5	Loam	CL, SC-SM, SC, CL-ML, SM, ML	A-4, A-5, A-2-5, A-7-6, A-2, A-6, A-2-6, A-7, A-2-7, A-2-4	0	0-27	62-100	23-100	19-97	13-73	19-41	3-17
	5-14	Clay loam, loam	CL, CL-ML, SC-SM, SC, SM, ML	A-6, A-2-7, A-5, A-7-6, A-2-5, A-2-4, A-7, A-2, A-2-6, A-4	0	0-20	78-100	57-100	40-93	29-73	19-43	3-21
	14-51	Clay loam, loam	CL, SC-SM, CL-ML, SC	A-6, A-4, A-7-6, A-2-4, A-2-7, A-7, A-5, A-2-5, A-2, A-2-6	0	0-19	79-100	59-100	42-96	31-77	21-45	6-25
	51-60	Clay, clay loam	CL, CH, SC-SM, SC	A-7-6, A-6, A-7	0	0-19	79-100	59-100	47-98	36-80	35-53	18-32

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
AeE: Allen-----	0-5	Loam	CL, SC-SM, SC, CL-ML, SM, ML	A-4, A-5, A-2-5, A-7-6, A-2, A-6, A-2-6, A-7, A-2-7, A-2-4	0	0-27	62-100	23-100	19-97	13-73	19-41	3-17
	5-14	Clay loam, loam	CL, CL-ML, SC-SM, SC, SM, ML	A-6, A-2-7, A-5, A-7-6, A-2-5, A-2-4, A-7, A-2, A-2-6, A-4	0	0-20	78-100	57-100	40-93	29-73	19-43	3-21
	14-51	Clay loam, loam	CL, SC-SM, CL-ML, SC	A-6, A-4, A-7-6, A-2-4, A-2-7, A-7, A-5, A-2-5, A-2, A-2-6	0	0-19	79-100	59-100	42-96	31-77	21-45	6-25
	51-60	Clay, clay loam	CL, CH, SC-SM, SC	A-7-6, A-6, A-7	0	0-19	79-100	59-100	47-98	36-80	35-53	18-32
AnB: Altavista-----	0-5	Sandy loam	SM, SC, SC-SM	A-6, A-2, A-2-4	0	0-6	93-100	93-100	64-80	30-43	20-36	4-13
	5-12	Sandy loam	SC, SC-SM	A-6, A-2, A-2-4	0	0-3	98-100	98-100	68-80	32-43	18-31	4-13
	12-47	Sandy clay loam, clay loam	CL, SC-SM, SC	A-6, A-7-6, A-7	0	0	98-100	98-100	79-95	43-59	29-44	13-25
	47-57	Sandy clay loam, sandy loam	SC, SC-SM, CL	A-7, A-7-6	0	0	98-100	98-100	77-97	40-59	24-43	9-24
	57-74	Loam, loamy fine sand, sandy loam, loamy sand	CL, CL-ML, SC-SM	A-6	0	0	98-100	98-100	75-94	52-70	18-36	4-17
	74-80	Sandy clay loam, sandy loam, loamy sand, loam, loamy fine sand	SC, CL, SC-SM	A-6, A-7-6, A-7	0	0	98-100	98-100	68-96	35-62	18-43	4-24

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
ApB: Appling-----	0-6	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	95-100	95-100	64-82	28-45	17-35	2-13
	6-10	Sandy clay loam, sandy loam	SC, CL	A-6, A-4	0	0-3	84-100	83-100	64-92	33-55	24-40	9-21
	10-41	Sandy clay, clay loam, clay, sandy clay loam	CL, SC	A-7-6, A-7	0	0	100	100	63-93	33-63	29-57	13-36
	41-51	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0	100	100	74-94	40-60	29-49	13-28
	51-60	Sandy clay, sandy loam, sandy clay loam	SC	A-4	0	0	100	100	55-83	25-53	22-49	7-28
Hard Labor-----	0-9	Sandy loam	SC, SM, SC-SM	A-4, A-2-4	0	0	95-100	95-100	64-83	29-45	17-35	2-13
	9-15	Sandy clay loam, sandy loam	SC, CL	A-6	0	0-3	84-100	83-100	63-91	31-53	22-39	7-19
	15-50	Sandy clay, clay loam, clay	CL	A-7-6	0	0	98-100	98-100	70-96	42-68	37-61	21-39
	50-60	Sandy clay, clay loam, sandy clay loam	CL, SC	A-7	0	0	100	100	68-98	38-68	33-61	17-39
ApC: Appling-----	0-6	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	97-100	97-100	65-82	30-46	17-35	2-13
	6-10	Sandy clay loam, sandy loam	CL, SC	A-6, A-4	0	0	95-100	94-100	73-92	41-58	24-40	9-21
	10-41	Sandy clay, clay loam, clay, sandy clay loam	CL	A-7-6, A-7	0	0	98-100	98-100	61-93	32-62	29-57	13-36
	41-51	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0	0	98-100	98-100	72-94	39-60	29-49	13-28
	51-60	Sandy loam, sandy clay loam	SC	A-4	0	0	100	100	74-100	38-66	22-49	7-28
Hard Labor-----	0-9	Sandy loam	SC, SM, SC-SM	A-4, A-2-4	0	0	97-100	97-100	64-82	26-42	17-35	2-13
	9-15	Sandy clay loam, sandy loam	CL, SC	A-6	0	0	95-100	95-100	72-92	37-55	22-39	7-19
	15-50	Sandy clay, clay, clay loam	CL	A-7-6	0	0	98-100	98-100	70-96	42-68	37-61	21-39
	50-60	Sandy clay, sandy clay loam, clay loam	SC, CL	A-7	0	0	98-100	98-100	67-98	38-68	33-61	17-39

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
ArB: Aragon-----	0-5	Sandy loam	SC, SC-SM	A-4, A-2, A-2-6, A-2-4, A-6	0	0-23	81-100	62-100	44-82	22-45	21-35	6-13
	5-13	Loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-7, A-5, A-7-6	0	0-23	81-100	62-100	50-100	36-79	24-44	9-25
	13-19	Clay loam, clay, silty clay	CL, SC-SM, SC	A-7-6, A-7, A-6	0	0-24	80-100	61-100	51-97	39-77	35-49	18-28
	19-46	Clay, silty clay	CH, SC, SC-SM	A-7-6, A-7	0	0-25	80-100	60-100	50-100	44-99	52-76	32-51
	46-64	Silty clay loam, clay loam	CL, SC-SM, SC, CH	A-7-6, A-6, A-7	0	0-23	81-100	62-100	55-100	49-100	33-70	17-47
ArC: Aragon-----	0-5	Sandy loam	SC, SC-SM	A-4, A-2, A-2-6, A-2-4, A-6	0	0-23	81-100	62-100	44-82	22-45	21-35	6-13
	5-13	Loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-7, A-5, A-7-6	0	0-23	81-100	62-100	50-100	36-79	24-44	9-25
	13-19	Clay loam, clay, silty clay	CL, SC-SM, SC	A-7-6, A-7, A-6	0	0-24	80-100	61-100	51-97	39-77	35-49	18-28
	19-46	Clay, silty clay	CH, SC, SC-SM	A-7-6, A-7	0	0-25	80-100	60-100	50-100	44-99	52-76	32-51
	46-64	Silty clay loam, clay loam	CL, SC-SM, SC, CH	A-7-6, A-6, A-7	0	0-23	81-100	62-100	55-100	49-100	33-70	17-47
BrB: Braswell-----	0-6	Sandy loam	SC-SM, SC	A-4, A-2-6, A-6, A-2, A-2-4	0	0	73-100	70-100	51-87	24-49	17-35	2-13
	6-11	Loam, sandy loam	CL	A-6	0	0	77-100	76-100	62-91	43-66	24-36	9-17
	11-33	Clay loam, sandy clay loam, silty clay loam	CL, SC-SM	A-7-6, A-6, A-7	0	0	77-100	76-100	59-97	44-78	29-49	13-28
	33-48	Loam, sandy loam	CL	A-6	0	0	81-100	81-100	62-97	44-75	18-38	4-19
	48-80	Sandy loam, loam	CL-ML, SC-SM	A-4	0	0	85-100	84-100	66-90	43-63	18-32	4-13

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
BrC: Braswell-----	0-6	Sandy loam	SC-SM, SC	A-4, A-2-6, A-6, A-2, A-2-4	0	0	73-100	70-100	51-87	24-49	17-35	2-13
	6-11	Loam, sandy loam	CL	A-6	0	0	77-100	76-100	62-91	43-66	24-36	9-17
	11-33	Clay loam, sandy clay loam, silty clay loam	CL, SC-SM	A-7-6, A-6, A-7	0	0	77-100	76-100	59-97	44-78	29-49	13-28
	33-48	Loam, sandy loam	CL	A-6	0	0	81-100	81-100	62-97	44-75	18-38	4-19
	48-80	Sandy loam, loam	CL-ML, SC-SM	A-4	0	0	85-100	84-100	66-90	43-63	18-32	4-13
BrD: Braswell-----	0-6	Sandy loam	SC-SM, SC	A-4, A-2-6, A-6, A-2, A-2-4	0	0	73-100	70-100	51-87	24-49	17-35	2-13
	6-11	Loam, sandy loam	CL	A-6	0	0	77-100	76-100	62-91	43-66	24-36	9-17
	11-33	Clay loam, sandy clay loam, silty clay loam	CL, SC-SM	A-7-6, A-6, A-7	0	0	77-100	76-100	59-97	44-78	29-49	13-28
	33-48	Loam, sandy loam	CL	A-6	0	0	77-100	76-100	58-97	42-75	18-38	4-19
	48-80	Sandy loam, loam	CL-ML, SC-SM	A-4	0	0	85-100	84-100	66-90	43-63	18-32	4-13
CaA: Cartecay-----	0-4	Sandy loam	SC, SM, SC-SM	A-4	0	0	97-100	97-100	69-80	34-44	25-36	6-13
	4-26	Sandy loam, loamy sand	SC, SC-SM	A-4, A-2	0	0-3	93-100	93-100	67-82	31-44	18-30	4-12
	26-66	Very gravelly loamy sand, sandy loam, coarse sandy loam	GC-GM, SC, SM	A-1-b, A-2	0	0-2	45-100	43-100	32-88	8-31	0-27	NP-10
CfA: Cedarbluff-----	0-5	Loam	CL, SC, SC-SM, ML, CL-ML, SM	A-6, A-5, A-2-6, A-2-5, A-7, A-2, A-7-6, A-4, A-2-7, A-2-4	0	0	81-100	62-100	50-98	34-74	21-42	6-19
	5-16	Clay loam, loam, sandy clay loam	CL, SC-SM, SC	A-6, A-7, A-7-6	0	0	80-100	61-100	48-96	37-77	28-45	12-25
	16-27	Clay loam, loam	CL, SC-SM, SC	A-6, A-7-6, A-7	0	0	82-100	63-100	49-99	36-79	27-49	12-28
	27-63	Clay loam, loam, clay	CL, CH, SC, SC-SM	A-7-6, A-6, A-7	0	0	81-100	63-100	48-100	36-82	29-53	13-32

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	In				Pct	Pct					Pct	
ChA:												
Chewacla-----	0-6	Loam	CL, CL-ML	A-6, A-4	0	0-4	72-100	71-100	56-98	38-74	20-43	3-18
	6-25	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC-SM, SC, CL-ML, SM	A-6, A-7-6, A-4	0	0-10	45-100	42-100	29-100	21-82	18-49	3-28
	25-30	Clay loam, sandy clay loam, loam	CL, SC-SM, SM, CL-ML, SC	A-6, A-4	0	0	71-100	69-100	48-97	35-78	18-44	3-25
	30-40	Sandy clay loam, loam, clay loam	SC, SC-SM, SM, CL, CL-ML	A-6, A-2-4, A-4	0	0	71-100	70-100	48-100	21-66	16-49	2-28
	40-60	Sandy clay loam, sandy loam	SC, SC-SM, SM, CL, CL-ML	A-7-6, A-2-7, A-2-6, A-2-5, A-2-4, A-6	0	0	54-100	52-100	30-89	13-55	16-44	2-25
CrD:												
Crawfordville---	0-2	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0-3	88-100	87-100	66-86	24-37	0-26	NP-7
	2-7	Sandy loam	SC, SC-SM, SM	A-4, A-2-4	0	0	85-100	84-100	58-84	26-46	16-32	2-13
	7-11	Clay, sandy clay, clay loam	CH	A-7-6	0	0	93-100	93-100	69-100	58-92	41-69	21-44
	11-17	Clay	CH	A-7-6	0	0-1	82-100	82-100	67-100	58-91	51-71	29-44
	17-21	Clay	CH	A-7-6	0	0-1	82-100	82-100	67-100	58-91	51-71	29-44
	21-25	Sandy clay loam, sandy clay	CL, SC	A-6, A-7	0	0	63-100	61-100	50-100	27-75	31-59	13-36
	25-28	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wateree-----	0-7	Sandy loam	SC-SM, SM, SC	A-4, A-2	0	0	71-100	70-100	50-85	24-47	17-33	2-12
	7-27	Sandy loam	SC-SM, SM, SC	A-4, A-2	0	0	94-100	93-100	67-85	32-47	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	97-100	97-100	73-88	18-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
DAM: Dam.												

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Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
FrD: Fruithurst-----	0-5	Channery fine sandy loam	SC, SC-SM	A-6, A-2	0	0-15	84-100	83-100	67-97	23-44	16-33	1-13
	5-9	Channery loam, fine sandy loam	CL	A-6	0	0-12	88-100	87-100	64-92	45-70	20-38	6-19
	9-14	Channery loam, clay loam	CL	A-6, A-7-6, A-7	0	0-12	88-100	87-100	71-99	52-77	27-44	12-25
	14-19	Channery clay loam, loam	CL	A-7-6, A-7, A-6	0	0-23	74-100	73-100	55-92	41-73	27-44	12-25
	19-31	Channery silty clay loam, clay loam, loam	CL	A-7-6	0	0-12	88-100	87-100	67-99	61-92	27-49	12-28
	31-35	Very channery loam, sandy loam	GC	A-6	0	0-33	56-100	55-100	40-92	28-70	20-38	6-19
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Braswell-----	0-6	Sandy loam	SC-SM, SC	A-4, A-2-6, A-6, A-2, A-2-4	0	0	73-100	70-100	51-87	24-49	17-35	2-13
	6-11	Loam, sandy loam	CL	A-6	0	0	77-100	76-100	62-91	43-66	24-36	9-17
	11-33	Clay loam, sandy clay loam, silty clay loam	CL, SC-SM	A-7-6, A-6, A-7	0	0	77-100	76-100	59-97	44-78	29-49	13-28
	33-48	Loam, sandy loam	CL	A-6	0	0	81-100	81-100	62-97	44-75	18-38	4-19
	48-80	Sandy loam, loam	SC-SM, CL-ML	A-4	0	0	78-100	77-100	60-90	39-63	18-32	4-13
FrE: Fruithurst-----	0-5	Channery fine sandy loam	SC, SC-SM	A-6, A-2	0	0-15	84-100	83-100	67-97	23-44	16-33	1-13
	5-9	Channery loam, fine sandy loam	CL	A-6	0	0-12	88-100	87-100	64-92	45-70	20-38	6-19
	9-14	Channery loam, clay loam	CL	A-6, A-7-6, A-7	0	0-12	88-100	87-100	71-99	52-77	27-44	12-25
	14-19	Channery clay loam, loam	CL	A-7-6, A-7, A-6	0	0-23	74-100	73-100	55-92	41-73	27-44	12-25
	19-31	Channery silty clay loam, clay loam, loam	CL	A-7-6	0	0-19	79-100	78-100	61-99	55-92	27-49	12-28
	31-35	Very channery loam, sandy loam	GC	A-6	0	0-33	56-100	55-100	40-92	28-70	20-38	6-19
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index	
			Unified	AASHTO	>10	3-10	4	10	40	200			
					inches	inches							
						Pct	Pct					Pct	
FrE: Braswell-----	In												
	0-6	Sandy loam	SC-SM, SC	A-4, A-2-6, A-6, A-2, A-2-4	0	0	92-100	92-100	66-87	31-49	17-35	2-13	
	6-11	Loam, sandy loam	CL	A-6	0	0	92-100	91-100	74-91	51-66	24-36	9-17	
	11-33	Clay loam, sandy clay loam, silty clay loam	CL, SC-SM	A-7-6, A-6, A-7	0	0	84-100	83-100	64-97	48-78	29-49	13-28	
	33-48	Loam, sandy loam	CL	A-6	0	0	71-100	69-100	53-97	38-75	18-38	4-19	
	48-80	Sandy loam, loam	SC-SM, CL-ML	A-4	0	0	71-100	70-100	55-90	36-63	18-32	4-13	
FtE: Fruithurst-----													
	0-5	Channery fine sandy loam	SC, SC-SM	A-6, A-2	0	0-12	88-100	88-100	71-97	25-44	16-33	1-13	
	5-9	Channery loam, fine sandy loam	CL	A-6	0	0-12	88-100	87-100	64-92	45-70	20-38	6-19	
	9-14	Channery loam, clay loam	CL	A-6, A-7-6, A-7	0	0-25	70-100	69-100	56-99	41-77	27-44	12-25	
	14-19	Channery clay loam, loam	CL	A-7-6, A-7, A-6	0	0-26	69-100	68-100	52-92	38-73	27-44	12-25	
	19-31	Channery silty clay loam, clay loam, loam	CL	A-7-6	0	0-25	70-100	69-100	54-99	49-92	27-49	12-28	
	31-35	Very channery loam, sandy loam	GC	A-6	0	0-36	51-100	50-100	37-92	26-70	20-38	6-19	
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---	
Tallapoosa-----													
	0-4	Channery fine sandy loam	SC, SC-SM	A-4, A-2	0	0-12	88-100	88-100	71-97	25-44	16-33	1-13	
	4-9	Channery loam, sandy loam	CL	A-6	0	0-12	88-100	87-100	68-94	48-71	22-38	7-19	
	9-15	Channery loam	CL	A-4	0	0-31	60-100	60-100	47-96	33-72	18-36	4-17	
	15-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---	

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
GrC: Grover-----	0-4	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	78-100	75-100	56-81	26-41	24-35	8-13
	4-11	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	75-100	73-100	53-80	25-41	23-33	8-13
	11-14	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-6	78-100	76-100	54-79	26-41	23-32	8-13
	14-25	Sandy clay loam, loam, clay loam	SC, SC-SM, CL	A-6, A-2-7, A-7-6, A-2-6, A-7, A-2	0	0-3	79-100	78-100	55-96	27-60	24-49	9-28
	25-31	Sandy loam, sandy clay loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-2	59-100	57-100	42-84	20-46	24-36	9-17
	31-80	Loamy sand, sandy loam	SC, SC-SM	A-2-4, A-2	0	0	100	100	77-87	21-31	16-27	2-10
Mountain Park---	0-4	Gravelly sandy loam	SC, SC-SM	A-2-6, A-4, A-2-4	0	0-8	78-100	75-100	52-80	24-43	20-34	4-13
	4-10	Gravelly sandy loam	SC, SC-SM	A-2-6, A-2-4, A-4	0	0-11	76-100	75-100	50-78	22-40	18-31	4-13
	10-23	Sandy clay loam, sandy loam	SC, CL	A-6, A-7	0	0-6	81-100	80-100	62-94	33-58	26-43	11-24
	23-32	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-4	0	0-4	58-100	57-100	42-84	20-46	24-36	9-17
	32-46	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	46-55	Sandy loam	SC, SC-SM	A-4, A-2-4	0	0	100	100	70-78	33-41	18-28	4-10
	55-65	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
GrD: Grover-----	0-4	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	78-100	75-100	56-81	26-41	24-35	8-13
	4-11	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	75-100	73-100	53-80	25-41	23-33	8-13
	11-14	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-6	78-100	76-100	54-79	26-41	23-32	8-13
	14-25	Sandy clay loam, loam, gravelly clay loam	SC, SC-SM, CL	A-6, A-2-7, A-7-6, A-2-6, A-7, A-2	0	0-3	84-100	84-100	59-96	30-60	24-49	9-28
	25-31	Sandy loam, sandy clay loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-3	93-100	93-100	69-84	33-46	24-36	9-17
	31-80	Loamy sand, sandy loam	SC, SC-SM	A-2-4, A-2	0	0	85-100	84-100	65-87	18-31	16-27	2-10
Mountain Park---	0-4	Gravelly sandy loam	SC, SC-SM	A-6, A-4, A-2-4	0	0-8	78-100	75-100	52-80	24-43	20-34	4-13
	4-10	Gravelly sandy loam	SC, SC-SM	A-6, A-2-4, A-4, A-2-6	0	0-11	76-100	75-100	50-78	22-40	18-31	4-13
	10-23	Sandy clay loam, sandy loam	CL, SC	A-6, A-7	0	0-3	84-100	83-100	64-94	34-58	26-43	11-24
	23-32	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-4	0	0-4	93-100	93-100	69-84	33-46	24-36	9-17
	32-46	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	46-55	Sandy loam	SC, SC-SM	A-4, A-2-4	0	0	100	100	70-78	33-41	18-28	4-10
	55-65	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
GrE: Grover-----	0-4	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	76-100	75-100	56-81	26-41	24-35	8-13
	4-11	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	75-100	73-100	53-80	25-41	23-33	8-13
	11-14	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-6	78-100	76-100	54-79	26-41	23-32	8-13
	14-25	Sandy clay loam, loam, gravelly clay loam	SC, SC-SM, CL	A-6, A-2-7, A-7-6, A-2-6, A-7, A-2	0	0-7	92-100	91-100	65-96	32-60	24-49	9-28
	25-31	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-4	0	0-5	100	100	74-84	36-46	24-36	9-17
	31-80	Loamy sand, sandy loam	SC, SC-SM	A-2-4, A-2	0	0-5	100	100	77-87	21-31	16-27	2-10
Mountain Park---	0-4	Gravelly sandy loam	SC, SC-SM	A-6, A-4, A-2-4	0	0-8	76-100	75-100	52-80	24-43	20-34	4-13
	4-10	Gravelly sandy loam	SC, SC-SM	A-6, A-2-4, A-4, A-2-6	0	0-11	76-100	75-100	50-78	22-40	18-31	4-13
	10-23	Sandy clay loam, sandy loam	CL, SC	A-6, A-7	0	0-8	91-100	91-100	70-94	37-58	26-43	11-24
	23-32	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-4	0	0-4	95-100	95-100	70-84	34-46	24-36	9-17
	32-46	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	46-55	Sandy loam	SC, SC-SM	A-4, A-2-4	0	0	100	100	70-78	33-41	18-28	4-10
	55-65	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
GrF: Grover-----	0-4	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	78-100	75-100	56-81	26-41	24-35	8-13
	4-11	Gravelly sandy loam	SC, SC-SM	A-2-4, A-2-6, A-6, A-4, A-2	0	0-8	78-100	75-100	55-80	26-41	23-33	8-13
	11-14	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-4, A-2	0	0-6	78-100	76-100	54-79	26-41	23-32	8-13
	14-25	Sandy clay loam, loam, gravelly clay loam	SC, SC-SM, CL	A-6, A-2-7, A-7-6, A-2-6, A-7, A-2	0	0-4	84-100	84-100	59-96	29-60	24-49	9-28
	25-31	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2-4, A-2-6, A-4, A-2	0	0-3	90-100	90-100	66-84	32-46	24-36	9-17
	31-80	Loamy sand, sandy loam	SC, SC-SM	A-2-4, A-2	0	0	78-100	77-100	59-87	16-31	16-27	2-10
Mountain Park---	0-4	Gravelly sandy loam	SC, SC-SM	A-2-6, A-4, A-2-4	0	0-8	76-100	75-100	52-80	24-43	20-34	4-13
	4-10	Gravelly sandy loam	SC, SC-SM	A-2-6, A-6, A-2-4, A-4	0	0-11	76-100	75-100	50-78	22-40	18-31	4-13
	10-23	Sandy clay loam, sandy loam	SC, CL	A-6, A-7	0	0-4	84-100	83-100	64-94	34-58	26-43	11-24
	23-32	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-4	0	0-9	97-100	96-100	71-84	34-46	24-36	9-17
	32-46	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	46-55	Sandy loam	SC, SC-SM	A-4, A-2-4	0	0	85-100	84-100	59-78	28-41	18-28	4-10
	55-65	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
HaB: Helena-----	0-9	Sandy loam	SC, SM, SC-SM	A-6, A-4	0	0	65-100	64-100	42-81	19-44	17-35	2-13
	9-14	Loam	SC, SM, SC-SM	A-6, A-4	0	0	54-100	52-100	40-91	27-67	17-33	2-13
	14-25	Clay loam, sandy clay	CL	A-7-6	0	0	77-100	76-100	64-100	49-86	36-57	19-36
	25-37	Clay, clay loam, sandy clay	CH	A-7-6, A-7	0	0	92-100	92-100	67-100	56-91	41-69	21-44
	37-49	Sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0	65-100	63-100	51-97	28-60	31-46	13-25
	49-60	Sandy clay loam, sandy loam	CL, SC	A-6, A-7	0	0	65-100	63-100	48-97	24-60	25-46	9-25

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	In				Pct	Pct					Pct	
LdB2:												
Lloyd-----	0-4	Sandy loam	SC, SM	A-4, A-2-4	0	0	91-100	90-100	62-82	29-45	19-35	3-13
	4-25	Clay loam, clay, silty clay	CL	A-7-6, A-6	0	0-15	82-100	81-100	69-100	54-91	37-61	21-39
	25-40	Sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	77-100	76-100	64-100	35-65	29-49	13-28
	40-48	Sandy loam, sandy clay loam	SC-SM	A-4, A-2-4	0	0	65-100	64-100	47-94	23-56	20-40	6-21
	48-80	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0	54-100	52-100	38-82	18-45	16-27	2-10
Agricola-----	0-5	Sandy loam	SC, SC-SM	A-6, A-2-4, A-2-6, A-2, A-4	0	0	91-100	90-100	66-79	32-41	26-35	9-13
	5-9	Sandy loam	SC, SC-SM	A-6, A-2-6, A-4, A-2, A-2-4	0	0	91-100	90-100	66-78	32-40	24-32	9-13
	9-24	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-6, A-7	0	0	84-100	83-100	70-97	54-77	36-49	19-28
	24-34	Cobbly sandy clay loam, clay loam, loam	SC, CL	A-6, A-2-6, A-2	0	0-29	81-100	80-100	63-94	35-60	32-49	16-28
	34-42	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Musella-----	0-5	Sandy loam	SC, SC-SM	A-6, A-2-4, A-2, A-4	0	0	91-100	90-100	62-78	28-40	21-34	6-13
	5-16	Gravelly sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0-3	77-100	76-100	62-100	34-65	29-49	13-28
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
LdC2:												
Lloyd-----	0-4	Sandy loam	SC, SM	A-4, A-2-4	0	0	82-100	81-100	56-82	26-45	19-35	3-13
	4-25	Clay loam, clay, silty clay	CL	A-7-6, A-6	0	0-14	67-100	66-100	56-100	43-91	37-61	21-39
	25-40	Sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	77-100	76-100	64-100	35-65	29-49	13-28
	40-48	Sandy loam, sandy clay loam	SC-SM	A-4, A-2-4	0	0	65-100	64-100	47-94	23-56	20-40	6-21
	40-80	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0	59-100	58-100	42-82	20-45	16-27	2-10

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
				Pct	Pct					Pct		
LdC2: Agricola-----	In											
	0-5	Sandy loam	SC, SC-SM	A-6, A-2-6, A-2-4, A-2, A-4	0	0	82-100	81-100	60-79	29-41	26-35	9-13
	5-9	Sandy loam	SC, SC-SM	A-6, A-2-6, A-4, A-2, A-2-4	0	0	82-100	81-100	59-78	29-40	24-32	9-13
	9-24	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-6, A-7	0	0	70-100	69-100	58-97	45-77	36-49	19-28
	24-34	Cobbly sandy clay loam, clay loam, loam	SC, SC-SM, CL	A-6	0	0-29	90-100	90-100	70-94	39-60	32-49	16-28
	34-42	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Musella-----	0-5	Sandy loam	SC, SC-SM	A-6, A-2-4, A-2, A-4	0	0	82-100	81-100	56-78	25-40	21-34	6-13
	5-16	Gravelly sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	71-100	69-100	57-100	31-65	29-49	13-28
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
LdD2: Lloyd-----	0-4	Sandy loam	SC, SM	A-4, A-2-4	0	0-6	77-100	76-100	52-82	24-45	19-35	3-13
	4-25	Clay loam, clay, silty clay	CL	A-7-6, A-6	0	0-8	83-100	82-100	70-100	54-91	37-61	21-39
	25-40	Sandy clay loam, clay loam	SC, SC-SM, CL	A-6	0	0	90-100	90-100	75-100	41-65	29-49	13-28
	40-48	Sandy loam, sandy clay loam	SC-SM	A-4, A-2-4	0	0	65-100	64-100	47-94	23-56	20-40	6-21
	48-80	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0	88-100	87-100	63-82	30-45	16-27	2-10
Agricola-----	0-5	Sandy loam	SC, SC-SM	A-2-6, A-2-4, A-6, A-2, A-4	0	0-6	77-100	76-100	56-79	27-41	26-35	9-13
	5-9	Sandy loam	SC, SC-SM	A-6, A-2-6, A-4, A-2, A-2-4	0	0-6	90-100	90-100	65-78	32-40	24-32	9-13
	9-24	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-6, A-7	0	0	84-100	76-100	64-97	49-77	36-49	19-28
	24-34	Sandy clay loam, clay loam, loam	SC, SC-SM, CL	A-6	0	0-7	70-100	69-100	54-94	30-60	32-49	16-28
	34-42	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Musella-----	0-5	Sandy loam	SC, SC-SM	A-6, A-2-4, A-2, A-4	0	0-6	77-100	76-100	52-78	23-40	21-34	6-13
	5-16	Gravelly sandy clay loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0-3	77-100	76-100	62-100	34-65	29-49	13-28
	16-20	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
MaC2: Madison-----	0-5	Sandy loam	SC, SM	A-4, A-2-4, A-2	0	0	92-100	92-100	62-82	28-45	17-35	2-13
	5-24	Sandy clay, clay loam	CL	A-7-6	0	0	92-100	91-100	71-98	42-66	37-57	21-36
	24-38	Sandy clay loam, sandy loam	CL, SC-SM	A-6	0	0	92-100	91-100	65-91	32-55	24-44	9-25
	38-50	Sandy clay loam, sandy loam	CL, SC-SM	A-6	0	0	97-100	97-100	68-91	34-55	24-44	9-25
	50-60	Sandy loam, loam	SC	A-4, A-2-4, A-2	0	0	98-100	98-100	68-84	30-46	16-32	2-13
PaB2: Pacolet-----	0-4	Sandy loam	SC, SC-SM	A-6, A-4	0	0	94-100	93-100	66-79	31-41	23-33	7-13
	4-25	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-7, A-6	0	0	97-100	96-100	82-100	63-87	36-57	19-36
	25-43	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2-4, A-2-6, A-2, A-4	0	0	94-100	93-100	69-94	33-56	24-44	9-25
	43-80	Sandy loam	SC-SM, SM, SC	A-4, A-2-4, A-2	0	0	78-100	77-100	54-79	24-41	17-27	3-10
PaC2: Pacolet-----	0-4	Sandy loam	SC, SC-SM	A-6, A-4	0	0	95-100	95-100	67-79	31-41	23-33	7-13
	4-25	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-7, A-6	0	0	95-100	95-100	80-100	62-87	36-57	19-36
	25-43	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2-4, A-2-6, A-2, A-4	0	0	71-100	70-100	52-94	25-56	24-44	9-25
	43-80	Sandy loam	SC-SM, SM, SC	A-4, A-2-4, A-2	0	0	94-100	93-100	66-79	30-41	17-27	3-10
PaD2: Pacolet-----	0-4	Sandy loam	SC, SC-SM	A-6, A-4	0	0-1	87-100	87-100	61-79	28-41	23-33	7-13
	4-25	Clay loam, sandy clay	CL, SC-SM	A-7-6, A-7, A-6	0	0	87-100	86-100	73-100	56-87	36-57	19-36
	25-43	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2-4, A-2-6, A-2, A-4	0	0-3	84-100	84-100	62-94	30-56	24-44	9-25
	43-80	Sandy loam	SC-SM, SM, SC	A-4, A-2-4, A-2	0	0	98-100	98-100	69-79	31-41	17-27	3-10

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
PeA: Pettyjon-----	0-12	Loam	CL, SC-SM, SC, CL-ML	A-4, A-7-6, A-5, A-6, A-7	0	0	92-100	84-100	70-100	49-75	21-41	6-19
	12-30	Clay loam, fine sandy loam, silty clay loam, silt loam, loam	CL, CL-ML, SC, SC-SM	A-6, A-7, A-5, A-7-6, A-4	0	0	92-100	84-100	60-96	44-77	21-45	6-25
	30-66	Loam, silt loam, clay loam, fine sandy loam, silty clay loam	CL, SC, CL-ML, SC-SM	A-6, A-4, A-7, A-5, A-7-6	0	0	92-100	84-100	66-100	46-80	20-45	6-25
	66-80	Loam, silt loam, sandy loam, fine sandy loam	CL, SM, ML, CL-ML, SC, SC-SM	A-4, A-6, A-2, A-1, A-2-6, A-2-4, A-1-b	0	0	67-100	34-100	27-100	19-75	18-38	3-19
Pg: Pits, quarry.												
PoF: Poindexter-----	0-8	Gravelly sandy loam	SC-SM	A-2-4	0	0-10	51-100	49-100	36-89	21-59	21-39	6-17
	8-14	Sandy loam, gravelly sandy clay loam, loam	SC, SC-SM	A-6, A-4	0	0-10	60-100	58-100	42-81	20-45	20-32	6-13
	14-24	Clay loam, sandy clay loam	CL, SC-SM	A-7-6, A-8, A-6	0	0-25	77-100	76-100	58-96	42-76	29-49	13-28
	24-30	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0-16	77-100	77-100	55-82	27-45	16-27	2-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wilkes-----	0-6	Channery sandy loam, sandy clay loam	SC-SM, SC	A-2-4	0	0-29	63-100	62-100	43-84	19-46	17-35	2-13
	6-14	Sandy clay loam, clay	SC	A-6	0	0-24	78-100	77-100	64-100	35-75	29-57	13-36
	14-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
PrE: Poindexter-----	0-8	Gravelly sandy loam	SC-SM	A-4	0	0-19	56-100	54-100	40-89	24-59	21-39	6-17
	8-14	Sandy loam, loam	SC, SC-SM	A-6, A-4	0	0-27	73-100	72-100	51-81	25-45	20-32	6-13
	14-24	Clay loam, sandy clay loam	CL, SC-SM	A-7-6, A-8, A-6	0	0-35	79-100	78-100	59-96	44-76	29-49	13-28
	24-30	Sandy loam, loamy sand	SC-SM, SM	A-2-4, A-4	0	0	78-100	77-100	56-82	27-45	16-27	2-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wilkes-----	0-6	Channery sandy loam	SC-SM, SM	A-2-4, A-4, A-1-b	0	0-28	66-100	65-100	45-84	20-46	17-35	2-13
	6-14	Sandy clay loam, clay	SC	A-6	0	0-34	80-100	79-100	66-100	36-75	29-57	13-36
	14-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
PrE:												
Rowan-----	0-6	Gravelly sandy loam	SC-SM, GC-GM	A-2-4	0	0-19	56-100	54-100	40-89	24-59	21-39	6-17
	6-14	Loam, sandy clay loam	CL, SC-SM, CL-ML	A-6, A-4	0	0-34	80-100	79-100	62-96	43-72	20-38	6-19
	14-25	Clay loam	CL, SC-SM	A-7-6, A-8, A-6	0	0-35	79-100	78-100	66-96	50-76	36-49	19-28
	25-36	Loam, sandy loam	CL	A-6	0	0-7	74-100	73-100	56-97	39-72	18-38	4-19
	36-66	Fine sandy loam	SC-SM	A-4	0	0-7	74-100	73-100	63-97	27-47	16-27	2-10
	66-70	Bedrock	---	---	---	---	---	---	---	---	---	---
PwC:												
Poindexter-----	0-8	Gravelly sandy loam	SC-SM	A-4	0	0-10	51-100	49-100	36-89	21-59	21-39	6-17
	8-14	Sandy loam, gravelly sandy clay loam, loam	SC, SC-SM	A-2-6, A-4	0	0-5	58-100	56-100	40-81	20-45	20-32	6-13
	14-24	Clay loam, sandy clay loam	CL, SC-SM	A-7-6, A-8, A-6	0	0	64-100	62-100	47-96	35-76	29-49	13-28
	24-30	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0	85-100	84-100	61-82	29-45	16-27	2-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wilkes-----	0-6	Channery sandy loam	SC-SM, SM	A-2-4, A-4, A-1-b	0	0-29	63-100	62-100	43-84	19-46	17-35	2-13
	6-14	Sandy clay loam, clay	SC	A-6	0	0	65-100	64-100	53-100	29-75	29-57	13-36
	14-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wynott-----	0-6	Sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0-10	51-100	49-100	34-84	15-46	17-35	2-13
	6-12	Clay loam	CL	A-7-6	0	0	64-100	63-100	48-96	35-76	29-49	13-28
	12-20	Clay	CH, CL	A-7-6, A-7	0	0	62-100	60-100	50-100	43-96	49-74	29-48
	20-26	Clay loam, sandy clay, sandy clay loam	CL, SC	A-6	0	0	83-100	83-100	66-100	47-82	29-53	13-32
	26-32	Sandy clay loam, sandy loam	CL, SM, SC-SM	A-6, A-2-4, A-2-6	0	0	71-100	70-100	46-97	21-60	16-44	2-25
	32-36	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
PwD:												
Poindexter-----	0-8	Gravelly sandy loam	SC-SM	A-2-4	0	0-3	48-100	45-100	34-89	20-59	21-39	6-17
	8-14	Sandy loam, gravelly sandy clay loam, loam	SC, SC-SM	A-6, A-4	0	0	54-100	52-100	37-81	18-45	20-32	6-13
	14-24	Clay loam, sandy clay loam	CL, SC-SM	A-7-6, A-8, A-6	0	0	42-100	40-100	31-96	22-76	29-49	13-28
	24-30	Sandy loam, loamy sand	SC-SM, SM	A-4, A-2-4	0	0	39-100	37-100	27-82	13-45	16-27	2-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wilkes-----	0-6	Channery sandy loam	SC-SM, SM	A-2-4, A-1-b	0	0-28	66-100	65-100	45-84	20-46	17-35	2-13
	6-14	Sandy clay loam, clay	SC	A-6	0	0	44-100	42-100	35-100	19-75	29-57	13-36
	14-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
PwD: Wynott-----	0-6	Sandy loam	SC, SM, SC-SM	A-2-4, A-4	0	0-3	48-100	45-100	31-84	14-46	17-35	2-13
	6-12	Clay loam	CL	A-7-6	0	0	43-100	41-100	31-96	23-76	29-49	13-28
	12-20	Clay	CH, CL	A-7-6, A-7	0	0	41-100	38-100	32-100	27-96	49-74	29-48
	20-26	Clay loam, sandy clay, sandy clay loam	CL, SC	A-6	0	0	37-100	35-100	28-100	20-82	29-53	13-32
	26-32	Sandy clay loam, sandy loam	CL, SM, SC-SM	A-6, A-2-4, A-2-6	0	0	39-100	36-100	24-97	11-60	16-44	2-25
	32-36	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
RnC: Rion-----	0-4	Sandy loam	SC, SC-SM	A-6, A-2, A-4	0	0	89-100	89-100	57-79	24-42	17-35	2-13
	4-12	Sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	94-100	93-100	61-81	27-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	77-100	76-100	56-91	29-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2, A-2-6, A-2-4, A-4	0	0	78-100	77-100	54-91	26-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-4, A-2-6, A-6, A-2-4, A-2	0	0	71-100	70-100	53-92	26-55	18-36	4-17
RnD: Rion-----	0-4	Sandy loam	SC, SC-SM	A-6, A-2, A-4	0	0-4	81-100	81-100	52-79	21-42	17-35	2-13
	4-12	Sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	78-100	77-100	50-81	23-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	CL, SC-SM, SC	A-6, A-2-6, A-2	0	0	77-100	76-100	56-91	29-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2, A-2-6, A-2-4, A-4	0	0	78-100	77-100	54-91	26-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-4, A-2-6, A-6, A-2-4, A-2	0	0	78-100	77-100	58-92	29-55	18-36	4-17

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
RnE: Rion-----	0-4	Sandy loam	SC, SC-SM	A-6, A-2, A-4	0	0	97-100	97-100	62-79	26-42	17-35	2-13
	4-12	Sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0	97-100	97-100	63-81	28-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6	0	0	95-100	95-100	70-91	36-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2, A-2-6, A-2-4, A-4	0	0	94-100	93-100	66-91	32-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-4, A-6	0	0	98-100	98-100	74-92	37-55	18-36	4-17
RwF: Rock outcrop----	0-60	Bedrock	---	---	---	---	---	---	---	---	---	---
Wake-----	0-4	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0	98-100	98-100	75-86	27-37	0-26	NP-7
	4-12	Loamy sand, sand	SC-SM, SC, SM	A-2-4, A-2	0	0	94-100	94-100	70-85	17-28	0-24	NP-7
	12-16	Bedrock	---	---	---	---	---	---	---	---	---	---
Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	98-100	98-100	67-81	30-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	94-100	93-100	62-79	28-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	94-100	94-100	70-88	17-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
SeC: Sedgefield-----	0-6	Sandy loam	SC, SM, SC-SM	A-6, A-4, A-2-4	0	0-3	84-100	84-100	55-81	25-44	17-35	2-13
	6-10	Sandy loam	SC, SC-SM, SM	A-4, A-2-4	0	0-4	70-100	69-100	46-81	21-45	16-32	2-13
	10-18	Clay, sandy clay, clay loam	CH	A-7-6	0	0	94-100	94-100	73-100	62-91	45-69	25-44
	18-26	Sandy clay, clay	CH	A-7-6	0	0	96-100	96-100	78-100	50-72	48-67	28-44
	26-33	Clay loam	CL	A-7-6	0	0	100	100	86-96	66-76	37-49	21-28
	33-41	Sandy clay, clay loam	CL, SC	A-6, A-7-6	0	0	98-100	98-100	61-87	32-58	29-53	13-32
	41-80	Sandy loam, loam	SC, SC-SM, SM, CL-ML, CL, ML	A-4, A-6, A-2-4	0	0	100	100	67-90	30-53	16-38	2-19

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
SeC: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-3	84-100	84-100	57-81	25-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	95-100	95-100	63-79	28-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	100	100	75-88	18-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
ShA: Shady-----	0-11	Loam	CL, ML, SM, SC-SM, CL-ML, SC	A-6, A-2-6, A-2-5, A-2, A-5, A-4, A-2-4, A-7-6, A-7, A-2-7	0	0-23	81-100	62-100	48-97	33-73	22-43	3-18
	11-40	Clay loam, silty clay loam, sandy clay loam	CL, SC-SM, SC	A-6, A-7-6, A-7	0	0-8	80-100	61-100	49-96	38-77	30-45	13-25
	40-56	Sandy clay loam, gravelly sandy clay loam	SC, CL, SC-SM	A-6, A-2-7, A-7, A-2-6, A-7-6, A-2	0	0-6	58-100	16-100	13-97	7-60	30-45	13-25
	56-60	Gravelly sandy loam, loamy sand, sandy loam, gravelly loamy sand	SC, SW-SM, SC-SM, GC, SM, SP-SM	A-2-4, A-2, A-2-6, A-1-a, A-1, A-1-b, A-6, A-4	0	0-11	58-100	17-100	11-82	5-45	16-32	2-13
ShB: Shady-----	0-11	Loam	CL, ML, SM, SC-SM, CL-ML, SC	A-6, A-2-6, A-2-5, A-2, A-5, A-4, A-2-4, A-7-6, A-7, A-2-7	0	0-23	81-100	62-100	48-97	33-73	22-43	3-18
	11-40	Clay loam, silty clay loam, sandy clay loam	CL, SC-SM, SC	A-6, A-7-6, A-7	0	0-8	80-100	61-100	49-96	38-77	30-45	13-25
	40-56	Sandy clay loam, gravelly sandy clay loam	SC, CL, SC-SM	A-6, A-2-7, A-7, A-2-6, A-7-6, A-2	0	0-6	58-100	16-100	13-97	7-60	30-45	13-25
	56-60	Gravelly sandy loam, loamy sand, sandy loam, gravelly loamy sand	SC, SW-SM, SC-SM, SM, SP-SM	A-2-4, A-2, A-2-6, A-1-a, A-1, A-1-b, A-6, A-4	0	0-11	58-100	17-100	11-82	5-45	16-32	2-13

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
SpF: Sipsey-----	0-5	Fine sandy loam	SC, SC-SM, SW-SM, SM, SP-SM	A-4, A-1, A-6, A-1-b, A-2-6, A-2, A-2-4	0	0-62	42-100	40-100	33-98	12-46	17-35	2-13
	5-24	Clay loam, sandy clay loam, silty clay loam, gravelly sandy clay loam	CL, SC, CH, SC-SM	A-6, A-7, A-7-6, A-2-7, A-2, A-2-6	0	0-61	43-100	41-100	33-100	25-82	30-50	13-28
	24-35	Fine sandy loam, sandy clay loam, sandy loam	SC, SC-SM	A-4, A-2-4, A-1-b, A-2-6, A-6, A-2	0	0-61	43-100	41-100	36-98	15-46	20-32	6-13
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Sunlight-----	0-10	Gravelly fine sandy loam	SC-SM, GP-GM, GC, GW-GM, SM, GC-GM, GM, SC, SP-SM, SW-SM, GP-GC	A-2-4, A-2-6, A-1-a, A-4, A-2, A-1-b, A-1, A-6	0	0	33-80	30-79	26-79	11-41	18-35	2-13
	10-15	Very channery fine sandy loam, extremely channery sandy loam, very channery clay loam, very gravelly clay loam, very gravelly silty clay loam	SC, SC-SM, CL-ML, CL, GC, GC-GM	A-2-4, A-2, A-7, A-7-6, A-6, A-5, A-1, A-4, A-2-5, A-2-6, A-1-b, A-2-7	0	7-23	41-85	38-84	33-84	14-51	21-45	6-25
	15-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
StA: Steadman-----	0-4	Silt loam	CL, SC-SM, CL-ML, ML	A-6, A-5, A-7-6, A-4, A-7	0	0	92-100	84-100	75-100	69-100	21-45	6-21
	4-16	Silt loam, silty clay loam, loam	CL, ML, SC-SM, CL-ML	A-6, A-5, A-7-6, A-4, A-7	0	0	92-100	84-100	74-100	68-98	21-42	6-19
	16-24	Silty clay loam, clay loam, silt loam	CL, SC-SM, CL-ML	A-7-6, A-7, A-4, A-5, A-6	0	0	92-100	84-100	66-100	63-100	20-47	6-26
	24-45	Silty clay loam, clay loam, loam, silt loam	CL, SC-SM, CL-ML	A-7-6, A-5, A-6, A-4, A-7	0	0	92-100	84-100	66-100	63-100	20-47	6-26
	45-60	Silty clay, gravelly sandy clay loam, silt loam, silty clay loam, gravelly sandy loam	CH, SC-SM, ML, CL, MH, CL-ML, SM, SC	A-7-6, A-1-b, A-2-5, A-1, A-2, A-6, A-5, A-4, A-7, A-2-6, A-2-7, A-2-4	0	0	68-100	33-100	21-100	20-100	22-59	6-36
TaF: Tallapoosa-----	0-4	Channery fine sandy loam	SC, SC-SM	A-6, A-2	0	0-19	79-100	79-100	64-97	22-44	16-33	1-13
	4-9	Channery loam, sandy loam	CL	A-6	0	0-19	79-100	78-100	61-94	43-71	22-38	7-19
	9-15	Channery loam	CL	A-6	0	0-22	74-100	74-100	59-96	41-72	18-36	4-17
	15-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Fruithurst-----	0-5	Channery fine sandy loam	SC, SC-SM	A-6, A-2	0	0-19	79-100	79-100	64-97	22-44	16-33	1-13
	5-9	Channery loam, fine sandy loam	CL	A-6	0	0-19	79-100	78-100	58-92	41-70	20-38	6-19
	9-14	Channery loam, clay loam	CL	A-7-6, A-7, A-6	0	0-22	74-100	74-100	60-99	44-77	27-44	12-25
	14-19	Channery clay loam, loam	CL	A-7-6, A-7, A-6	0	0-26	69-100	68-100	52-92	38-73	27-44	12-25
	19-31	Channery silty clay loam, clay loam, loam	CL	A-7-6	0	0-22	74-100	74-100	57-99	52-92	27-49	12-28
	31-35	Very channery loam, sandy loam	GC	A-6	0	0-36	51-100	50-100	41-92	30-70	27-38	12-19
	35-60	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
ToA:												
Toccoa-----	0-6	Sandy loam	SC, SC-SM	A-4, A-2	0	0-3	97-100	97-100	67-79	32-43	21-33	4-12
	6-80	Sandy loam, loamy sand	SC, SM, SC-SM	A-4, A-2	0	0-7	77-100	76-100	50-81	22-44	15-31	1-13
UaE:												
Udorthents.												
Ub:												
Urban land.												
W:												
Water.												
WaC:												
Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	94-100	93-100	63-81	28-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	97-100	97-100	64-79	29-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	100	100	75-88	18-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Helena-----	0-9	Sandy loam	SC, SM, SC-SM	A-6, A-4	0	0	94-100	93-100	61-81	27-44	17-35	2-13
	9-14	Loam	SC, SM, SC-SM	A-6, A-4	0	0	94-100	93-100	71-91	48-67	17-33	2-13
	14-25	Clay loam, sandy clay	CL	A-7-6	0	0	97-100	97-100	81-100	62-86	36-57	19-36
	25-37	Clay, clay loam, sandy clay	CH	A-7-6, A-7	0	0	96-100	96-100	70-100	58-91	41-69	21-44
	37-49	Sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0	100	100	82-97	45-60	31-46	13-25
	49-60	Sandy clay loam, sandy loam	CL, SC	A-6, A-7	0	0	100	100	76-97	39-60	25-46	9-25
WaD:												
Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	97-100	97-100	66-81	29-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	97-100	97-100	64-79	29-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	85-100	84-100	63-88	15-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WaD: Helena-----	0-9	Sandy loam	SC, SM, SC-SM	A-6, A-4	0	0	97-100	97-100	63-81	28-44	17-35	2-13
	9-14	Loam	SC-SM	A-6, A-4	0	0	97-100	97-100	73-91	50-67	17-33	2-13
	14-25	Clay loam, sandy clay	CL	A-7-6	0	0	92-100	91-100	77-100	59-86	36-57	19-36
	25-37	Clay, clay loam, sandy clay	CH	A-7-6, A-7	0	0	91-100	90-100	65-100	55-91	41-69	21-44
	37-49	Sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0	84-100	84-100	68-97	37-60	31-46	13-25
	49-60	Sandy clay loam, sandy loam	CL, SC	A-6, A-7	0	0	84-100	84-100	63-97	32-60	25-46	9-25
WeD: Wateree-----	0-9	Sandy loam	SC	A-2-4, A-4, A-2	0	0-9	84-100	83-100	56-81	25-43	17-31	2-12
	9-17	Sandy loam	SC	A-2-4, A-4, A-2	0	0-10	80-100	79-100	55-82	24-44	17-31	2-12
	17-28	Sandy loam, coarse sandy loam	SC	A-2-4, A-2	0	0	87-100	87-100	58-80	26-43	16-30	2-12
	28-30	Sandy loam, loamy sand, gravelly sandy loam	SC-SM	A-2-4, A-2	0	0	100	100	66-79	28-41	0-27	NP-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	48-52	Bedrock	---	---	---	---	---	---	---	---	---	---
Rion-----	0-5	Sandy loam	SC, SC-SM	A-6, A-2, A-4	0	0-9	84-100	83-100	55-81	24-44	17-35	2-13
	5-19	Sandy loam	SC, SC-SM	A-4, A-2, A-2-4	0	0-10	81-100	80-100	53-81	24-45	16-32	2-13
	19-48	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6	0	0	87-100	87-100	68-95	36-59	27-44	12-25
	48-55	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2, A-2-6, A-2-4, A-4	0	0	100	100	71-91	34-54	20-40	6-21
	55-80	Sandy loam, sandy clay loam, loamy sand	SC, SC-SM	A-4, A-2-6, A-6, A-2-4, A-2	0	0	100	100	70-87	33-50	18-36	4-17

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WeE: Wateree-----	0-9	Sandy loam	SC	A-4, A-2-4, A-2	0	0-6	81-100	80-100	54-81	24-43	17-31	2-12
	9-17	Sandy loam	SC	A-4, A-2-4, A-2	0	0-6	81-100	80-100	55-82	25-44	17-31	2-12
	17-28	Sandy loam, coarse sandy loam, gravelly sandy loam	SC	A-4, A-2	0	0-6	78-100	77-100	52-80	23-43	16-30	2-12
	28-30	Sandy loam, loamy sand, gravelly sandy loam	SC-SM	A-4, A-2	0	0	84-100	84-100	56-79	23-41	0-27	NP-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	48-52	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Rion-----	0-5	Sandy loam	SC, SC-SM	A-4, A-2, A-2-4	0	0-6	81-100	80-100	54-82	24-45	17-35	2-13
	5-19	Sandy loam	SC, SC-SM	A-6, A-4, A-2	0	0-6	81-100	80-100	53-81	24-44	16-32	2-13
	19-48	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0-6	78-100	77-100	60-95	32-59	27-44	12-25
	48-55	Sandy loam, sandy clay loam	SC, SC-SM	A-6, A-2, A-2-6, A-2-4, A-4	0	0	92-100	92-100	65-91	32-54	20-40	6-21
	55-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-4, A-2-6, A-6, A-2-4, A-2	0	0	85-100	84-100	63-92	32-55	18-36	4-17
WnC: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-7	87-100	86-100	59-81	26-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	94-100	93-100	62-79	28-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	89-100	89-100	67-88	16-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WnC: Rion-----	0-4	Sandy loam	SM, SC-SM	A-2-4, A-2, A-4	0	0-7	87-100	86-100	55-79	23-42	17-35	2-13
	4-12	Sandy loam	SM, SC-SM	A-2-4, A-4, A-2	0	0-7	84-100	84-100	55-81	25-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	93-100	93-100	68-91	35-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-2-6, A-6, A-4, A-2	0	0	97-100	97-100	68-91	33-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-2-4, A-2-6, A-6, A-4, A-2	0	0	89-100	89-100	66-92	33-55	18-36	4-17
WnD: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-3	84-100	84-100	57-81	25-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	94-100	93-100	62-79	28-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	85-100	84-100	63-88	15-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Rion-----	0-4	Sandy loam	SM, SC-SM	A-2-4, A-2, A-4	0	0	85-100	84-100	54-79	22-42	17-35	2-13
	4-12	Sandy loam	SM, SC-SM	A-2-4, A-4, A-2	0	0	91-100	90-100	59-81	26-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6, A-2-6, A-2	0	0	93-100	93-100	68-91	35-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-2-6, A-6, A-4, A-2	0	0	94-100	93-100	66-91	32-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-2-4, A-2-6, A-6, A-4, A-2	0	0	85-100	84-100	63-92	32-55	18-36	4-17
WnE: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-7	77-100	76-100	51-81	23-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	92-100	92-100	61-79	27-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	100	100	75-88	18-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WnE: Rion-----	0-4	Sandy loam	SM, SC-SM	A-2-4, A-2, A-4	0	0-7	77-100	76-100	48-79	20-42	17-35	2-13
	4-12	Sandy loam	SM, SC-SM	A-2-4, A-4, A-2	0	0	94-100	93-100	61-81	27-44	16-32	2-13
	12-28	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-6	0	0-3	97-100	96-100	71-91	37-55	27-44	12-25
	28-38	Sandy loam, sandy clay loam	SC-SM, SC	A-2-4, A-2-6, A-6, A-4, A-2	0	0	100	100	71-91	34-54	20-40	6-21
	38-80	Sandy loam, sandy clay loam, loamy sand	SC-SM, CL-ML, CL, SC	A-4, A-6	0	0	100	100	75-92	38-55	18-36	4-17
WrC: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-3	87-100	87-100	59-81	26-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-3	90-100	90-100	60-79	27-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	85-100	84-100	63-88	15-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wake-----	0-4	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0-3	88-100	87-100	66-86	24-37	0-26	NP-7
	4-12	Loamy sand, sand	SC-SM, SC, SM	A-2-4, A-2	0	0-3	91-100	90-100	68-85	16-28	0-24	NP-7
	12-16	Bedrock	---	---	---	---	---	---	---	---	---	---
WrD: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	95-100	95-100	64-81	29-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	100	100	66-79	30-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	100	100	75-88	18-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wake-----	0-4	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0	95-100	95-100	73-86	26-37	0-26	NP-7
	4-12	Loamy sand, sand	SC-SM, SC, SM	A-2-4, A-2	0	0	100	100	75-85	18-28	0-24	NP-7
	12-16	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
						Pct	Pct				Pct	
	<i>In</i>											
WrE: Wateree-----	0-7	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0-3	84-100	84-100	57-81	25-43	17-33	2-12
	7-27	Sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	95-100	95-100	63-79	28-43	16-30	2-12
	27-30	Loamy sand, sandy loam, coarse sandy loam	SC-SM, SC, SM	A-2-4, A-2	0	0	85-100	84-100	63-88	15-31	0-27	NP-10
	30-45	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
Wake-----	0-4	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0-3	85-100	84-100	64-86	23-37	0-26	NP-7
	4-12	Loamy sand, sand	SC-SM, SC, SM	A-2-4, A-2	0	0	95-100	95-100	71-85	17-28	0-24	NP-7
	12-16	Bedrock	---	---	---	---	---	---	---	---	---	---
WrF: Wateree-----	0-9	Sandy loam	SM	A-4, A-2-4, A-2	0	0	73-100	72-100	49-81	22-43	17-31	2-12
	9-17	Sandy loam	SM	A-2-4, A-4, A-2	0	0	77-100	76-100	53-82	23-44	17-31	2-12
	17-28	Sandy loam, coarse sandy loam, gravelly sandy loam	SM	A-4, A-2	0	0-7	70-100	68-100	46-80	20-43	16-30	2-12
	28-30	Sandy loam, loamy sand, gravelly sandy loam	SM	A-4, A-2	0	0	100	100	66-79	28-41	0-27	NP-10
	30-48	Weathered bedrock	---	---	---	---	---	---	---	---	---	---
	48-52	Unweathered bedrock	---	---	---	---	---	---	---	---	---	---
Wake-----	0-4	Loamy sand	SM, SC, SC-SM	A-2-4, A-2, A-4	0	0	74-100	73-100	56-86	20-37	0-26	NP-7
	4-12	Loamy sand, sand	SC-SM, SC, SM	A-2-4, A-2	0	0-7	71-100	69-100	52-85	13-28	0-24	NP-7
	12-16	Bedrock	---	---	---	---	---	---	---	---	---	---

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WsC: Waynesboro-----	0-6	Clay loam	CL, CH, SC-SM, SC	A-7-6, A-7, A-2-7, A-2-6, A-2, A-6	0	0-37	73-100	46-100	41-100	32-82	37-52	19-28
	6-13	Clay loam, sandy clay loam, gravelly clay loam, clay	CL, SC-SM, SC, CH	A-7-6, A-7, A-2-6, A-6, A-2-7, A-2	0	0-37	73-100	46-100	38-97	30-78	36-52	18-28
	13-26	Clay, clay loam	CH, SC-SM, SC, CL	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39
	26-72	Clay, clay loam	CH, SC-SM, CL, SC	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39
WsD: Waynesboro-----	0-6	Clay loam	CL, CH, SC-SM, SC	A-7-6, A-7, A-2-7, A-2-6, A-2, A-6	0	0-37	73-100	46-100	41-100	32-82	37-52	19-28
	6-13	Clay loam, gravelly clay loam, clay	CL, SC-SM, SC, CH	A-7-6, A-7, A-2-6, A-6, A-2-7, A-2	0	0-37	73-100	46-100	38-97	30-78	36-52	18-28
	13-26	Clay, clay loam	CH, SC-SM, SC, CL	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39
	26-72	Clay, clay loam	CH, SC-SM, CL, SC	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39
WsE: Waynesboro-----	0-6	Clay loam	CL, CH, SC-SM, SC	A-7-6, A-7, A-2-7, A-2-6, A-2, A-6	0	0-37	73-100	46-100	41-100	32-82	37-52	19-28
	6-13	Clay loam, sandy clay loam, gravelly clay loam, clay	CL, SC-SM, SC, CH	A-7-6, A-7, A-2-6, A-6, A-2-7, A-2	0	0-37	73-100	46-100	38-97	30-78	36-52	18-28
	13-26	Clay, clay loam	CH, SC-SM, SC, CL	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39
	26-72	Clay, clay loam	CH, SC-SM, CL, SC	A-7-6, A-7	0	0-25	80-100	60-100	51-100	41-88	43-62	24-39

Table 14.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10	4	10	40	200		
					inches	inches						
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
WtA: Wehadkee-----	0-5	Silt loam	CL, SC-SM, CL-ML, ML	A-4, A-6	0	0	100	100	83-100	65-88	20-46	2-19
	5-15	Silty clay loam, clay loam, silt loam	CL, SC-SM, CL-ML	A-7-6, A-7, A-4, A-5, A-6	0	0	92-100	84-100	65-100	62-100	20-47	6-26
	15-25	Loam, silt loam, silty clay loam, sandy clay loam	CL, CL-ML	A-6, A-4	0	0	100	100	80-100	58-83	20-45	6-25
	25-38	Sandy loam, sandy clay loam, silt loam	SC	A-4	0	0	100	100	73-91	38-56	20-38	6-19
	38-56	Sandy clay loam, sandy loam, loamy sand	SC, SC-SM, SM, CL, CL-ML	A-7-6, A-2-7, A-2-6, A-2-5, A-2-4, A-6	0	0	54-100	52-100	30-89	13-55	16-44	2-25
WyB: Wickham-----	0-7	Sandy loam	SC, SC-SM	A-4, A-6, A-2-4	0	0-1	94-100	93-100	65-80	31-44	20-34	4-13
	7-12	Sandy loam	SC, SC-SM	A-6, A-4	0	0	94-100	93-100	66-81	32-44	20-32	6-13
	12-54	Sandy clay loam, clay loam, loam	SC, SC-SM, CL	A-6, A-7	0	0-3	77-100	76-100	59-95	32-59	27-44	12-25
	54-80	Sandy loam	SC-SM, SC	A-4	0	0	92-100	92-100	69-82	34-44	18-27	4-10

Soil Survey of Paulding County, Georgia

Table 15.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		
AaE2:					
Agricola-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Lloyd-----	---	---	---	Moderate	Moderate
Musella-----	Paralithic bedrock	14-20	Moderately cemented	Moderate	Moderate
AcF2:					
Agricola-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Lloyd-----	---	---	---	Moderate	Moderate
Musella-----	Paralithic bedrock	14-20	Moderately cemented	Moderate	Moderate
AeB:					
Allen-----	---	---	---	Moderate	High
AeC:					
Allen-----	---	---	---	Moderate	High
AeD:					
Allen-----	---	---	---	Moderate	High
AeE:					
Allen-----	---	---	---	Moderate	High
AnB:					
Altavista-----	---	---	---	High	Moderate
ApB:					
Appling-----	---	---	---	Moderate	Moderate
Hard Labor-----	---	---	---	High	Moderate
ApC:					
Appling-----	---	---	---	Moderate	Moderate
Hard Labor-----	---	---	---	High	Moderate
ArB:					
Aragon-----	---	---	---	High	Moderate
ArC:					
Aragon-----	---	---	---	High	Moderate
BrB:					
Braswell-----	---	---	---	Low	Moderate
BrC:					
Braswell-----	---	---	---	Low	Moderate
BrD:					
Braswell-----	---	---	---	Low	Moderate
CaA:					
Cartecay-----	---	---	---	High	High

Soil Survey of Paulding County, Georgia

Table 15.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		
CfA: Cedarbluff-----	---	---	---	High	Moderate
ChA: Chewacla-----	---	---	---	High	Moderate
CrD: Crawfordville-----	Paralithic bedrock	20-40	Moderately cemented	High	Moderate
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
DAM: Dam.					
FrD: Fruithurst-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	High
Braswell-----	---	---	---	Low	Moderate
FrE: Fruithurst-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	High
Braswell-----	---	---	---	Low	Moderate
FtE: Fruithurst-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	High
Tallapoosa-----	Paralithic bedrock	10-20	Moderately cemented	Low	High
GrC: Grover-----	---	---	---	Low	Moderate
Mountain Park-----	Paralithic bedrock	20-40	Moderately cemented	Low	Moderate
GrD: Grover-----	---	---	---	Low	Moderate
Mountain Park-----	Paralithic bedrock	20-40	Moderately cemented	Low	Moderate
GrE: Grover-----	---	---	---	Low	Moderate
Mountain Park-----	Paralithic bedrock	20-40	Moderately cemented	Low	Moderate
GrF: Grover-----	---	---	---	Low	Moderate
Mountain Park-----	Paralithic bedrock	20-40	Moderately cemented	Low	Moderate
HaB: Helena-----	---	---	---	High	Moderate
LdB2: Lloyd-----	---	---	---	Moderate	Moderate
Agricola-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Musella-----	Paralithic bedrock	14-20	Moderately cemented	Moderate	Moderate
LdC2: Lloyd-----	---	---	---	Moderate	Moderate

Soil Survey of Paulding County, Georgia

Table 15.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		
LdC2: Agricola-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Musella-----	Paralithic bedrock	14-20	Moderately cemented	Moderate	Moderate
LdD2: Lloyd-----	---	---	---	Moderate	Moderate
Agricola-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Musella-----	Paralithic bedrock	14-20	Moderately cemented	Moderate	Moderate
MaC2: Madison-----	---	---	---	Moderate	Moderate
PaB2: Pacolet-----	---	---	---	Low	Moderate
PaC2: Pacolet-----	---	---	---	Low	Moderate
PaD2: Pacolet-----	---	---	---	Low	Moderate
PeA: Pettyjon-----	---	---	---	Low	Moderate
Pg: Pits, quarry.					
PoF: Poindexter-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Wilkes-----	Paralithic bedrock	10-20	Moderately cemented	Low	Moderate
PrE: Poindexter-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Wilkes-----	Paralithic bedrock	10-20	Moderately cemented	Low	Moderate
Rowan-----	Lithic bedrock	61-80	Strongly cemented	Low	Moderate
PwC: Poindexter-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Wilkes-----	Paralithic bedrock	10-20	Moderately cemented	Low	Moderate
Wynott-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
PwD: Poindexter-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
Wilkes-----	Paralithic bedrock	10-20	Moderately cemented	Low	Moderate
Wynott-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate
RnC: Rion-----	---	---	---	Low	Moderate
RnD: Rion-----	---	---	---	Low	Moderate

Soil Survey of Paulding County, Georgia

Table 15.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
RnE:		<i>In</i>	<i>In</i>		
Rion-----	---	---	---	Low	Moderate
RwF:					
Rock outcrop-----	Lithic bedrock	0	Indurated	---	---
Wake-----	Lithic bedrock	11-20	Indurated	Low	High
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
SeC:					
Sedgefield-----	---	---	---	High	Moderate
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
ShA:					
Shady-----	---	---	---	Low	Moderate
ShB:					
Shady-----	---	---	---	Low	Moderate
SpF:					
Sipsey-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Sunlight-----	Paralithic bedrock	10-20	Moderately cemented	Low	High
StA:					
Steadman-----	---	---	---	High	Moderate
TaF:					
Tallapoosa-----	Paralithic bedrock	10-20	Moderately cemented	Low	High
Fruithurst-----	Paralithic bedrock	20-40	Moderately cemented	Moderate	High
ToA:					
Toccoa-----	---	---	---	Moderate	Moderate
UaE:					
Udorthents.					
Ub:					
Urban land.					
W:					
Water-----	---	---	---	High	---
WaC:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Helena-----	---	---	---	High	Moderate
WaD:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Helena-----	---	---	---	High	Moderate
WeD:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
	Lithic bedrock	40-60	Indurated		
Rion-----	---	---	---	Low	Moderate

Soil Survey of Paulding County, Georgia

Table 15.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Risk of corrosion	
	Kind	Depth to top	Hardness	Uncoated steel	Concrete
		<i>In</i>	<i>In</i>		
WeE:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
	Lithic bedrock	40-60	Indurated		
Rion-----	---	---	---	Low	Moderate
WnC:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Rion-----	---	---	---	Low	Moderate
WnD:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Rion-----	---	---	---	Low	Moderate
WnE:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Rion-----	---	---	---	Low	Moderate
WrC:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Wake-----	Lithic bedrock	11-20	Indurated	Low	High
WrD:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Wake-----	Lithic bedrock	11-20	Indurated	Low	High
WrE:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Wake-----	Lithic bedrock	11-20	Indurated	Low	High
WrF:					
Wateree-----	Paralithic bedrock	20-40	Moderately cemented	Low	High
Wake-----	Lithic bedrock	11-20	Indurated	Low	High
WsC:					
Waynesboro-----	---	---	---	High	Moderate
WsD:					
Waynesboro-----	---	---	---	High	Moderate
WsE:					
Waynesboro-----	---	---	---	High	Moderate
WtA:					
Wehadkee-----	---	---	---	High	Moderate
WyB:					
Wickham-----	---	---	---	Moderate	Moderate

Soil Survey of Paulding County, Georgia

Table 16.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
AaE2: Agricola-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Lloyd-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Musella-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
AcF2: Agricola-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Lloyd-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Musella-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
AeB: Allen-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
AeC: Allen-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
AeD: Allen-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
AeE: Allen-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
AnB: Altavista-----	C	Jan-Apr	1.5-2.5	Apparent	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	1.5-2.5	Apparent	---	---	---	---	None
ApB: Appling-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Hard Labor-----	C	Jan-Apr	2.5-3.3	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	2.5-3.3	Perched	---	---	---	---	None
ApC: Appling-----	B	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
ApC: Hard Labor-----	C	Jan-Apr	2.5-3.3	Perched	---	---	---	---	None
		May-Nov	>6.0	---	---	---	---	---	None
		Dec	2.5-3.3	Perched	---	---	---	---	None
ArB: Aragon-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
ArC: Aragon-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
BrB: Braswell-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
BrC: Braswell-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
BrD: Braswell-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
CaA: Cartecay-----	C/D	Jan-Apr	0.8-1.7	Apparent	---	---	---	Brief	Occasional
		May-Nov	>6.0	---	---	---	---	---	---
		Dec	0.8-1.7	Apparent	---	---	---	Brief	Occasional
CfA: Cedarbluff-----	C/D	Jan-Apr	0.5-1.7	Apparent	---	---	---	Brief	Occasional
		May-Oct	>6.0	---	---	---	---	---	---
		Nov-Dec	0.5-1.7	Apparent	---	---	---	Brief	Occasional
ChA: Chewacla-----	C/D	Jan-Apr	0.5-2.0	Apparent	---	---	---	Brief	Occasional
		May-Nov	>6.0	---	---	---	---	---	---
		Dec	0.5-2.0	Apparent	---	---	---	Brief	Occasional
CrD: Crawfordville---	D	Jan-Apr	1.0-1.5	Perched	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov	1.0-1.5	Perched	---	---	---	---	None
		Dec	1.0-1.5	Perched	---	---	---	---	None
Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
DAM: Dam.									
FrD: Fruithurst-----	C	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
FrD: Braswell-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
FrE: Fruithurst-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Braswell-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
FtE: Fruithurst-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Tallapoosa-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
GrC: Grover-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Mountain Park---	C	Jan-Dec	>6.0	---	---	---	---	---	None
GrD: Grover-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Mountain Park---	C	Jan-Dec	>6.0	---	---	---	---	---	None
GrE: Grover-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Mountain Park---	C	Jan-Dec	>6.0	---	---	---	---	---	None
GrF: Grover-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Mountain Park---	C	Jan-Dec	>6.0	---	---	---	---	---	None
HaB: Helena-----	D	Jan-Apr	1.5-2.5	Perched	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	1.5-2.5	Perched	---	---	---	---	None
LdB2: Lloyd-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Agricola-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Musella-----	D	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
LdC2: Lloyd-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Agricola-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Musella-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
LdD2: Lloyd-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Agricola-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Musella-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
MaC2: Madison-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
PaB2: Pacolet-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
PaC2: Pacolet-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
PaD2: Pacolet-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
PeA: Pettyjon-----	C	Jan-Apr May-Nov Dec	>6.0 >6.0 >6.0	---	---	---	---	Brief --- Brief	Occasional --- Occasional
Pg: Pits, quarry.									
PoF: Poindexter-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Wilkes-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
PrE: Poindexter-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Wilkes-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
Rowan-----	C	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
PwC: Poindexter-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Wilkes-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
Wynott-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
PwD: Poindexter-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Wilkes-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
Wynott-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
RnC: Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
RnD: Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
RnE: Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
RwF: Rock outcrop----	---	Jan-Dec	---	---	---	---	---	---	None
Wake-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
SeC: Sedgefield-----	C/D	Jan-Apr	1.0-1.5	Perched	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	1.0-1.5	Perched	---	---	---	---	None
Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
ShA: Shady-----	B	Jan-Apr	>6.0	---	---	---	---	Brief	Occasional
		May-Oct	>6.0	---	---	---	---	---	---
		Nov-Dec	>6.0	---	---	---	---	Brief	Occasional
ShB: Shady-----	B	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
SpF: Sipsey-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
Sunlight-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
StA: Steadman-----	C	Jan-May	1.5-3.0	Apparent	---	---	---	Brief	Occasional
		Jun-Nov	>6.0	---	---	---	---	---	---
		Dec	1.5-3.0	Apparent	---	---	---	Brief	Occasional
TaF: Tallapoosa-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
Fruithurst-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
ToA: Toccoa-----	A	Jan-Apr	3.3-5.0	Apparent	---	---	---	Brief	Occasional
		May-Nov	>6.0	---	---	---	---	---	---
		Dec	3.3-5.0	Apparent	---	---	---	Brief	Occasional
UaE: Udorthents.									
Ub: Urban land.									
WaC: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Helena-----	D	Jan-Apr	1.5-2.5	Perched	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	1.5-2.5	Perched	---	---	---	---	None
WaD: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Helena-----	D	Jan-Apr	1.5-2.5	Perched	---	---	---	---	None
		May-Oct	>6.0	---	---	---	---	---	None
		Nov-Dec	1.5-2.5	Perched	---	---	---	---	None
WeD: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
WeE: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
WeE: Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
WnC: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
WnD: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
WnE: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Rion-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
WrC: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Wake-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
WrD: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Wake-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
WrE: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Wake-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
WrF: Wateree-----	B	Jan-Dec	>6.0	---	---	---	---	---	None
Wake-----	D	Jan-Dec	>6.0	---	---	---	---	---	None
WsC: Waynesboro-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
WsD: Waynesboro-----	C	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Months	Water table		Ponding			Flooding	
			Upper limit	Kind	Surface water depth	Duration	Frequency	Duration	Frequency
			<i>Ft</i>		<i>Ft</i>				
WsE: Waynesboro-----	C	Jan-Dec	>6.0	---	---	---	---	---	None
WtA: Wehadkee-----	C/D	Jan-May	0	Apparent	0.2-0.8	Long	Occasional	Brief	Occasional
		Jun-Oct	0.0-1.0	Apparent	---	---	---	---	---
		Nov-Dec	0	Apparent	0.2-0.8	Long	Occasional	Brief	Occasional
WyB: Wickham-----	B	Jan-Dec	>6.0	---	---	---	---	---	None

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties

[Entries under "Erosion factors--T" apply to the entire profile. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
<b>AaE2:</b>											
Agricola-----	0-5	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.20	.24	3
	5-9	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	9-24	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	24-34	24-40	1.50-1.60	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.17	.28	
	34-42	---	---	---	---	---	---	---	---	---	
Lloyd-----	0-4	7-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	4-25	30-55	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-40	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-48	10-30	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	48-80	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Musella-----	0-5	10-19	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.5-2.0	.28	.28	2
	5-16	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.20	.28	
	16-20	---	---	---	---	---	---	---	---	---	
<b>AcF2:</b>											
Agricola-----	0-5	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.20	.24	3
	5-9	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.0-0.5	.20	.28	
	9-24	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	24-34	24-40	1.50-1.60	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.15	.28	
	34-42	---	---	---	---	---	---	---	---	---	
Lloyd-----	0-4	7-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	4-25	30-55	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-40	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-48	10-30	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	48-80	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Musella-----	0-5	10-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.5-2.0	.20	.24	2
	5-16	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.20	.28	
	16-20	---	---	---	---	---	---	---	---	---	
<b>AeB:</b>											
Allen-----	0-5	7-25	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.8-3.0	.20	.20	5
	5-14	7-30	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.5-2.0	.20	.20	
	14-51	10-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	4.5-5.5	0.3-0.8	.28	.28	
	51-60	27-45	1.40-1.60	0.6-2	0.10-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
<b>AeC:</b>											
Allen-----	0-5	7-25	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.8-3.0	.20	.20	5
	5-14	7-30	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.5-2.0	.20	.20	
	14-51	10-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	4.5-5.5	0.3-0.8	.28	.28	
	51-60	27-45	1.40-1.60	0.6-2	0.10-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
<b>AeD:</b>											
Allen-----	0-5	7-25	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.8-3.0	.20	.20	5
	5-14	7-30	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.5-2.0	.20	.20	
	14-51	10-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	4.5-5.5	0.3-0.8	.28	.28	
	51-60	27-45	1.40-1.60	0.6-2	0.10-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
<b>AeE:</b>											
Allen-----	0-5	7-25	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.8-3.0	.20	.20	5
	5-14	7-30	1.30-1.50	0.6-2	0.14-0.19	0.0-2.9	4.5-5.5	0.5-2.0	.20	.20	
	14-51	10-35	1.40-1.60	0.6-2	0.12-0.17	0.0-2.9	4.5-5.5	0.3-0.8	.28	.28	
	51-60	27-45	1.40-1.60	0.6-2	0.10-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
<b>AnB:</b>											
Altavista-----	0-5	8-19	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.0-6.0	0.5-3.0	.24	.24	5
	5-12	8-19	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.0-6.0	0.0-0.5	.24	.24	
	12-47	20-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.0-6.0	0.0-0.5	.24	.24	
	47-57	15-34	1.45-1.60	0.6-2	0.15-0.17	0.0-2.9	5.0-6.0	0.0-0.5	.24	.24	
	57-74	8-25	1.45-1.65	0.6-2	0.17-0.19	0.0-2.9	5.0-6.0	0.0-0.5	.10	.10	
	74-80	8-34	1.45-1.60	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.15	.20	
<b>ApB:</b>											
Appling-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	4
	6-10	15-30	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	10-41	20-50	1.35-1.45	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	41-51	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	51-60	12-40	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
Hard Labor-----	0-9	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	4
	9-15	12-28	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-1.0	.24	.24	
	15-50	30-55	1.40-1.50	0.2-0.6	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	50-60	25-55	1.45-1.55	0.06-0.2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
<b>ApC:</b>											
Appling-----	0-6	5-20	1.40-1.65	2-6	0.10-0.15	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	4
	6-10	15-30	1.25-1.45	2-6	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	10-41	20-50	1.25-1.45	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	41-51	20-40	1.25-1.45	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
	51-60	12-40	1.20-1.50	0.6-2	0.08-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.28	.28	
Hard Labor-----	0-9	5-20	1.40-1.65	2-6	0.10-0.15	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	4
	9-15	12-28	1.40-1.65	2-6	0.10-0.15	0.0-2.9	4.5-6.0	0.0-1.0	.24	.24	
	15-50	30-55	1.25-1.45	0.2-0.6	0.12-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	50-60	25-55	1.25-1.45	0.06-0.2	0.12-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
<b>ArB:</b>											
Aragon-----	0-5	10-20	1.45-1.60	2-6	0.14-0.18	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	3
	5-13	15-35	1.45-1.55	0.6-2	0.15-0.18	0.0-2.9	4.5-5.5	0.0-0.5	.37	.37	
	13-19	27-40	1.35-1.50	0.6-2	0.12-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
	19-46	45-70	1.35-1.55	0.06-0.2	0.10-0.16	3.0-5.9	4.5-5.5	0.0-0.5	.20	.20	
	46-64	25-65	1.40-1.55	0.2-0.6	0.14-0.19	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
<b>ArC:</b>											
Aragon-----	0-5	10-20	1.45-1.60	2-6	0.14-0.18	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	3
	5-13	15-35	1.45-1.55	0.6-2	0.15-0.18	0.0-2.9	4.5-5.5	0.0-0.5	.37	.37	
	13-19	27-40	1.35-1.50	0.6-2	0.12-0.15	0.0-2.9	4.5-5.5	0.0-0.5	.20	.20	
	19-46	45-70	1.35-1.55	0.06-0.2	0.10-0.16	3.0-5.9	4.5-5.5	0.0-0.5	.20	.20	
	46-64	25-65	1.40-1.55	0.2-0.6	0.14-0.19	0.0-2.9	4.5-5.5	0.0-0.5	.24	.24	
<b>BrB:</b>											
Braswell-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.28	.28	3
	6-11	15-25	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	11-33	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	33-48	8-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	48-80	8-20	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
<b>BrC:</b>											
Braswell-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.28	.28	3
	6-11	15-25	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	11-33	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	33-48	8-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	48-80	8-20	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
BrD:											
Braswell-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.28	.28	3
	6-11	15-25	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	11-33	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	33-48	8-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	48-80	8-20	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
CaA:											
Cartecay-----	0-4	10-19	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.5	2.0-3.0	.24	.24	5
	4-26	8-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.0-0.5	.24	.24	
	26-66	2-15	1.60-1.80	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.0-0.2	.15	.20	
CfA:											
Cedarbluff-----	0-5	10-28	1.40-1.60	0.6-2	0.17-0.22	0.0-2.9	5.1-6.0	0.5-2.0	.43	.43	5
	5-16	18-35	1.40-1.55	0.6-2	0.15-0.19	0.0-2.9	5.1-5.5	0.5-1.0	.37	.37	
	16-27	18-40	1.50-1.65	0.06-0.2	0.10-0.14	0.0-2.9	5.1-5.5	0.0-0.5	.32	.32	
	27-63	20-45	1.45-1.65	0.06-0.2	0.08-0.14	0.0-2.9	5.1-5.5	0.0-0.5	.32	.32	
ChA:											
Chewacla-----	0-6	7-27	1.45-1.55	0.6-2	0.15-0.22	0.0-2.9	4.5-6.5	1.0-3.0	.28	.28	5
	6-25	7-40	1.40-1.60	0.6-2	0.15-0.24	0.0-2.9	4.5-6.5	0.0-0.5	.32	.32	
	25-30	7-35	1.45-1.55	0.6-2	0.15-0.24	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	30-40	5-40	1.45-1.65	0.6-2	0.12-0.20	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	40-60	5-35	1.40-1.65	0.6-2	0.10-0.14	0.0-2.9	4.5-7.8	0.0-0.2	.28	.28	
CrD:											
Crawfordville----	0-2	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.15	.20	3
	2-7	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.3-0.8	.24	.24	
	7-11	30-60	1.35-1.45	0.06-0.2	0.08-0.10	6.0-8.9	5.1-6.5	0.0-0.5	.28	.28	
	11-17	40-60	1.25-1.35	0.00-0.06	0.08-0.10	9.0-11.9	5.1-7.3	0.0-0.5	.28	.28	
	17-21	40-60	1.25-1.35	0.00-0.06	0.08-0.10	9.0-11.9	5.1-7.3	0.0-0.5	.28	.28	
	21-25	20-50	1.35-1.45	0.06-0.2	0.13-0.15	3.0-5.9	5.1-7.3	0.0-0.5	.28	.28	
	25-28	---	---	---	---	---	---	---	---	---	
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.55-1.65	2-6	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.17	.17	
	30-45	---	---	---	---	---	---	---	---	---	
DAM:											
Dam.											
FrD:											
Fruithurst-----	0-5	4-20	1.50-1.60	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.5-1.0	.15	.28	3
	5-9	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	9-14	18-35	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	14-19	18-35	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	19-31	18-40	1.45-1.55	0.6-2	0.18-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.28	
	31-35	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	35-60	---	---	---	---	---	---	---	---	---	
Braswell-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.28	.28	3
	6-11	15-25	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	11-33	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	33-48	8-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	48-80	8-20	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
FrE:											
Fruithurst-----	0-5	4-20	1.50-1.60	0.6-2	0.14-0.16	0.0-2.9	4.5-5.0	0.5-1.0	.15	.28	3
	5-9	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	9-14	18-35	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	14-19	18-35	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	19-31	18-40	1.45-1.55	0.6-2	0.18-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.28	
	31-35	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	35-60	---	---	---	---	---	---	---	---	---	
Braswell-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.28	.28	3
	6-11	15-25	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	11-33	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	33-48	8-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	48-80	8-20	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
FtE:											
Fruithurst-----	0-5	4-20	1.50-1.60	0.6-2	0.14-0.16	0.0-2.9	4.5-5.0	0.5-1.0	.15	.28	3
	5-9	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	9-14	18-35	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	14-19	18-35	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	19-31	18-40	1.45-1.55	0.6-2	0.18-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.28	
	31-35	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	35-60	---	---	---	---	---	---	---	---	---	
Tallapoosa-----	0-4	4-20	1.50-1.60	0.6-2	0.12-0.16	0.0-2.9	4.5-5.0	0.5-1.0	.20	.32	2
	4-9	12-28	1.45-1.55	0.6-2	0.15-0.18	0.0-2.9	4.5-5.0	0.0-0.5	.28	.43	
	9-15	8-25	1.45-1.55	0.6-2	0.10-0.14	0.0-2.9	4.5-5.0	0.0-0.5	.24	.49	
	15-60	---	---	---	---	---	---	---	---	---	
GrC:											
Grover-----	0-4	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	3
	4-11	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.3-1.0	.24	.24	
	11-14	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.0-0.8	.24	.24	
	14-25	15-40	1.45-1.60	0.6-2	0.18-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	25-31	15-25	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	31-80	5-15	1.50-1.60	0.6-2	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
Mountain Park-----	0-4	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	3
	4-10	8-19	1.50-1.65	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	10-23	17-34	1.45-1.55	0.6-2	0.18-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	23-32	15-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	32-46	---	---	---	---	---	---	---	---	---	
	46-55	8-16	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	55-65	---	---	---	---	---	---	---	---	---	
GrD:											
Grover-----	0-4	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	3
	4-11	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.3-1.0	.24	.24	
	11-14	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.0-0.8	.24	.24	
	14-25	15-40	1.45-1.60	0.6-2	0.18-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	25-31	15-25	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	31-80	5-15	1.50-1.60	0.6-2	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
Mountain Park-----	0-4	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	3
	4-10	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
	10-23	17-34	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	23-32	15-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	32-46	---	---	---	---	---	---	---	---	---	
	46-55	8-16	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	55-65	---	---	---	---	---	---	---	---	---	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
GrE:											
Grover-----	0-4	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	3
	4-11	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.3-1.0	.24	.24	
	11-14	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.0-0.8	.24	.24	
	14-25	15-40	1.45-1.60	0.6-2	0.18-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	25-31	15-25	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	31-80	5-15	1.50-1.60	0.6-2	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
Mountain Park-----	0-4	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	3
	4-10	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
	10-23	17-34	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	23-32	15-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	32-46	---	---	---	---	---	---	---	---	---	
	46-55	8-16	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	55-65	---	---	---	---	---	---	---	---	---	
GrF:											
Grover-----	0-4	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	3
	4-11	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.3-1.0	.24	.24	
	11-14	13-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.0-0.8	.24	.24	
	14-25	15-40	1.45-1.60	0.6-2	0.18-0.20	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	25-31	15-25	1.50-1.60	0.6-2	0.10-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	31-80	5-15	1.50-1.60	0.6-2	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
Mountain Park-----	0-4	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	3
	4-10	8-19	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
	10-23	17-34	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	23-32	15-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	32-46	---	---	---	---	---	---	---	---	---	
	46-55	8-16	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	55-65	---	---	---	---	---	---	---	---	---	
HaB:											
Helena-----	0-9	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	3.5-6.5	0.5-2.0	.24	.24	4
	9-14	5-20	1.50-1.60	0.6-2	0.17-0.19	0.0-2.9	3.5-6.5	0.5-1.0	.24	.24	
	14-25	28-50	1.45-1.55	0.2-0.6	0.15-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.28	.28	
	25-37	30-60	1.25-1.35	0.06-0.2	0.08-0.10	6.0-8.9	3.5-5.5	0.0-0.5	.28	.28	
	37-49	20-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
	49-60	14-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
LdB2:											
Lloyd-----	0-4	7-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	4-25	30-55	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-40	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-48	10-30	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	48-80	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Agricola-----	0-5	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.20	.24	3
	5-9	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.0-0.5	.20	.28	
	9-24	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	24-34	24-40	1.50-1.60	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.15	.28	
	34-42	---	---	---	---	---	---	---	---	---	
Musella-----	0-5	10-19	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.5-2.0	.20	.24	2
	5-16	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.20	.28	
	16-20	---	---	---	---	---	---	---	---	---	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
LdC2:											
Lloyd-----	0-4	7-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	4-25	30-55	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-40	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-48	10-30	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-80	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Agricola-----	0-5	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.20	.24	3
	5-9	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.0-0.5	.20	.28	
	9-24	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	24-34	24-40	1.50-1.60	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.15	.28	
	34-42	---	---	---	---	---	---	---	---	---	
Musella-----	0-5	10-19	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.5-2.0	.20	.24	2
	5-16	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.20	.28	
	16-20	---	---	---	---	---	---	---	---	---	
LdD2:											
Lloyd-----	0-4	7-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	4-25	30-55	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-40	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	40-48	10-30	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	48-80	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
Agricola-----	0-5	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.20	.24	3
	5-9	15-20	1.50-1.60	2-6	0.11-0.14	0.0-2.9	4.5-6.5	0.0-0.5	.20	.28	
	9-24	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	24-34	24-40	1.50-1.60	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.28	.28	
	34-42	---	---	---	---	---	---	---	---	---	
Musella-----	0-5	10-19	1.50-1.60	2-6	0.11-0.13	0.0-2.9	5.1-6.5	0.5-2.0	.20	.24	2
	5-16	20-40	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	5.1-6.5	0.0-0.5	.20	.28	
	16-20	---	---	---	---	---	---	---	---	---	
MaC2:											
Madison-----	0-5	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	4
	5-24	30-50	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.32	.32	
	24-38	15-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.32	
	38-50	15-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.28	.32	
	50-60	5-20	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.37	.32	
PaB2:											
Pacolet-----	0-4	12-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-1.0	.20	.20	2
	4-25	28-50	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-43	15-35	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	43-80	6-15	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
PaC2:											
Pacolet-----	0-4	12-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-1.0	.20	.20	2
	4-25	28-50	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-43	15-35	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	43-80	6-15	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
PaD2:											
Pacolet-----	0-4	12-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-1.0	.20	.20	2
	4-25	28-50	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	25-43	15-35	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	
	43-80	6-15	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.28	.28	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
PeA:											
Pettyjon-----	0-12	10-27	1.40-1.60	0.6-2	0.15-0.22	0.0-2.9	6.1-7.4	0.5-2.0	.37	.37	5
	12-30	10-35	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	6.1-7.4	0.5-1.0	.32	.32	
	30-66	10-35	1.40-1.60	0.6-2	0.17-0.19	0.0-2.9	6.1-7.4	0.0-1.0	.37	.37	
	66-80	7-27	1.45-1.60	0.6-2	0.17-0.19	0.0-2.9	6.1-7.4	0.0-0.5	.43	.43	
Pg:											
Pits, quarry.											
PoF:											
Poindexter-----	0-8	10-25	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-7.3	0.5-2.0	.24	.24	3
	8-14	10-20	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	14-24	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	24-30	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	30-48	---	---	---	---	---	---	---	---	---	
Wilkes-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.5	0.5-2.0	.17	.24	2
	6-14	20-50	1.50-1.60	0.2-0.6	0.15-0.17	0.0-2.9	5.6-7.4	0.0-0.5	.32	.32	
	14-48	---	---	---	---	---	---	---	---	---	
PrE:											
Poindexter-----	0-8	10-25	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-7.3	0.5-2.0	.24	.24	3
	8-14	10-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	14-24	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	24-30	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	30-48	---	---	---	---	---	---	---	---	---	
Wilkes-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.5	0.5-2.0	.17	.24	2
	6-14	20-50	1.50-1.60	0.2-0.6	0.15-0.17	0.0-2.9	5.6-7.4	0.0-0.5	.32	.32	
	14-48	---	---	---	---	---	---	---	---	---	
Rowan-----	0-6	10-25	1.50-1.65	2-6	0.12-0.14	0.0-2.9	5.1-7.3	0.5-2.0	.17	.24	5
	6-14	10-28	1.50-1.60	0.6-2	0.17-0.19	0.0-2.9	5.6-7.3	0.0-0.5	.20	.24	
	14-25	28-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.20	.24	
	25-36	8-27	1.50-1.60	0.6-2	0.17-0.19	0.0-2.9	6.1-7.8	0.0-0.5	.20	.24	
	36-66	5-15	1.50-1.60	0.6-2	0.14-0.16	0.0-2.9	6.1-7.8	0.0-0.5	.20	.24	
	66-70	---	---	---	---	---	---	---	---	---	
PwC:											
Poindexter-----	0-8	10-25	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-7.3	0.5-2.0	.24	.24	3
	8-14	10-20	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	14-24	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	24-30	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	30-48	---	---	---	---	---	---	---	---	---	
Wilkes-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.5	0.5-2.0	.17	.24	2
	6-14	20-50	1.50-1.60	0.2-0.6	0.15-0.17	0.0-2.9	5.6-7.4	0.0-0.5	.32	.32	
	14-48	---	---	---	---	---	---	---	---	---	
Wynott-----	0-6	5-20	1.50-1.60	2-6	0.11-0.15	0.0-2.9	5.1-7.3	0.5-2.0	.24	.24	3
	6-12	20-40	1.45-1.55	0.2-0.6	0.14-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.28	.28	
	12-20	40-65	1.25-1.45	0.06-0.2	0.08-0.10	6.0-8.9	5.6-7.3	0.0-0.5	.28	.28	
	20-26	20-45	1.30-1.50	0.2-0.6	0.14-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.28	.28	
	26-32	5-35	1.45-1.60	0.2-0.6	0.15-0.17	0.0-2.9	6.1-7.8	0.0-0.2	.28	.28	
	32-36	---	---	---	---	---	---	---	---	---	
PwD:											
Poindexter-----	0-8	10-25	1.50-1.65	2-6	0.12-0.14	0.0-2.9	4.5-7.3	0.5-2.0	.24	.24	3
	8-14	10-20	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	14-24	20-40	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	24-30	5-15	1.50-1.60	0.6-2	0.11-0.14	0.0-2.9	4.5-7.3	0.0-0.5	.28	.28	
	30-48	---	---	---	---	---	---	---	---	---	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors				
									Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct					
PwD: Wilkes-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.5	0.5-2.0	.17	.24	2		
	6-14	20-50	1.50-1.60	0.2-0.6	0.15-0.17	0.0-2.9	5.6-7.4	0.0-0.5	.32	.32			
	14-48	---	---	---	---	---	---	---	---	---			
Wynott-----	0-6	5-20	1.50-1.60	2-6	0.11-0.15	0.0-2.9	5.1-7.3	0.5-2.0	.24	.24	3		
	6-12	20-40	1.45-1.55	0.2-0.6	0.14-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.28	.28			
	12-20	40-65	1.25-1.45	0.06-0.2	0.08-0.10	6.0-8.9	5.6-7.3	0.0-0.5	.28	.28			
	20-26	20-45	1.30-1.50	0.2-0.6	0.14-0.16	0.0-2.9	5.6-7.3	0.0-0.5	.28	.28			
	26-32	5-35	1.45-1.60	0.2-0.6	0.15-0.17	0.0-2.9	6.1-7.8	0.0-0.2	.28	.28			
	32-36	---	---	---	---	---	---	---	---	---			
RnC: Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5		
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24			
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
RnD: Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5		
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24			
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
RnE: Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5		
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24			
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28			
RwF: Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	5		
	Wake-----	0-4	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.20		.32	1
		4-12	2-12	1.55-1.65	6-20	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.20		.32	
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3		
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24			
	27-30	2-15	1.55-1.65	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20			
	30-45	---	---	---	---	---	---	---	---	---			
SeC: Sedgefield-----	0-6	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	4		
	6-10	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.3-0.8	.24	.24			
	10-18	35-60	1.25-1.35	0.06-0.2	0.08-0.10	6.0-8.9	4.5-6.5	0.0-0.5	.28	.28			
	18-26	40-60	1.35-1.45	0.06-0.2	0.08-0.10	3.0-5.9	5.6-8.0	0.0-0.5	.28	.28			
	26-33	30-40	1.40-1.50	0.06-0.2	0.14-0.16	0.0-2.9	5.6-8.0	0.0-0.5	.28	.28			
	33-41	20-45	1.45-1.55	0.06-0.2	0.10-0.12	0.0-2.9	5.6-8.0	0.0-0.5	.28	.28			
	41-80	5-28	1.50-1.60	0.2-0.6	0.11-0.13	0.0-2.9	5.6-8.0	0.0-0.2	.28	.28			
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3		
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24			
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20			
	30-45	---	---	---	---	---	---	---	---	---			

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
ShA:											
Shady-----	0-11	7-27	1.40-1.60	0.6-2	0.17-0.19	0.0-2.9	5.5-7.8	2.0-3.0	.20	.20	5
	11-40	20-35	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	4.5-6.0	0.5-1.0	.20	.20	
	40-56	20-35	1.40-1.60	0.6-2	0.12-0.19	0.0-2.9	4.5-6.0	0.5-1.0	.20	.20	
	56-60	5-20	1.50-1.70	2-6	0.09-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.20	.20	
ShB:											
Shady-----	0-11	7-27	1.40-1.60	0.6-2	0.17-0.22	0.0-2.9	5.5-7.8	2.0-3.0	.20	.20	5
	11-40	20-35	1.40-1.60	0.6-2	0.15-0.19	0.0-2.9	4.5-6.0	0.5-1.0	.20	.20	
	40-56	20-35	1.40-1.60	0.6-2	0.12-0.19	0.0-2.9	4.5-6.0	0.5-1.0	.20	.20	
	56-60	5-20	1.50-1.70	2-6	0.09-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.20	.20	
SpF:											
Sipsey-----	0-5	5-20	1.35-1.50	2-6	0.15-0.19	0.0-2.9	5.1-6.0	0.5-2.0	.24	.24	3
	5-24	20-40	1.40-1.60	0.6-2	0.13-0.19	0.0-2.9	5.1-6.0	0.5-1.0	.28	.28	
	24-35	10-20	1.40-1.60	0.6-2	0.14-0.16	0.0-2.9	5.1-6.0	0.0-0.5	.15	.15	
	35-60	---	---	---	---	---	---	---	---	---	
Sunlight-----	0-10	5-20	1.40-1.60	0.6-2	0.08-0.15	0.0-2.9	4.5-5.5	1.0-2.0	.15	.28	2
	10-15	10-35	1.50-1.70	0.6-2	0.04-0.13	0.0-2.9	4.5-5.5	0.5-1.0	.17	.28	
	15-60	---	---	---	---	---	---	---	---	---	
StA:											
Steadman-----	0-4	10-30	1.40-1.60	2-6	0.17-0.22	0.0-2.9	5.6-7.4	0.5-3.0	.37	.37	5
	4-16	10-28	1.40-1.55	0.6-2	0.17-0.22	0.0-2.9	5.6-7.4	0.5-2.0	.37	.37	
	16-24	10-37	1.40-1.55	0.6-2	0.17-0.22	0.0-2.9	5.6-7.4	0.0-1.0	.32	.32	
	24-45	10-37	1.40-1.55	0.6-2	0.17-0.22	0.0-2.9	5.6-7.4	0.0-1.0	.32	.32	
	45-60	10-50	1.35-1.60	0.6-2	0.08-0.22	3.0-5.9	5.6-7.4	0.0-0.8	.32	.32	
TaF:											
Tallapoosa-----	0-4	4-20	1.50-1.60	0.6-2	0.12-0.16	0.0-2.9	4.5-5.5	0.5-1.0	.32	.32	2
	4-9	12-28	1.45-1.55	0.6-2	0.15-0.18	0.0-2.9	4.5-5.5	0.0-0.5	.43	.43	
	9-15	8-25	1.45-1.55	0.6-2	0.10-0.14	0.0-2.9	4.5-5.5	0.0-0.5	.49	.49	
	15-60	---	---	---	---	---	---	---	---	---	
Fruithurst-----	0-5	4-20	1.50-1.60	0.6-2	0.14-0.16	0.0-2.9	4.5-5.0	0.5-1.0	.15	.28	3
	5-9	10-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	9-14	18-35	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.20	.32	
	14-19	18-35	1.40-1.50	0.6-2	0.14-0.16	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	19-31	18-40	1.45-1.55	0.6-2	0.18-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.28	
	31-35	18-28	1.45-1.55	0.6-2	0.15-0.20	0.0-2.9	4.5-5.5	0.0-0.5	.15	.32	
	35-60	---	---	---	---	---	---	---	---	---	
ToA:											
Toccoa-----	0-6	8-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	5.1-6.2	1.0-2.0	.10	.10	4
	6-80	4-19	1.50-1.65	2-6	0.11-0.13	0.0-2.9	5.1-6.0	0.0-0.5	.20	.20	
UaE:											
Udorthents.											
Ub:											
Urban land.											
W:											
Water.											
WaC:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
WaC:											
Helena-----	0-9	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	3.5-6.5	0.5-2.0	.24	.24	4
	9-14	5-20	1.50-1.60	0.6-2	0.17-0.19	0.0-2.9	3.5-6.5	0.5-1.0	.24	.24	
	14-25	28-50	1.45-1.55	0.2-0.6	0.15-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.28	.28	
	25-37	30-60	1.25-1.35	0.06-0.2	0.08-0.10	6.0-8.9	3.5-5.5	0.0-0.5	.28	.28	
	37-49	20-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
	49-60	14-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
WaD:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Helena-----	0-9	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	3.5-6.5	0.5-2.0	.24	.24	4
	9-14	5-20	1.50-1.60	0.6-2	0.17-0.19	0.0-2.9	3.5-6.5	0.5-1.0	.24	.24	
	14-25	28-50	1.45-1.55	0.2-0.6	0.15-0.17	0.0-2.9	3.5-5.5	0.0-0.5	.28	.28	
	25-37	30-60	1.25-1.35	0.06-0.2	0.08-0.10	6.0-8.9	3.5-5.5	0.0-0.5	.28	.28	
	37-49	20-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
	49-60	14-35	1.46-1.56	0.2-0.6	0.15-0.17	3.0-5.9	3.5-5.5	0.0-0.5	.28	.28	
WeD:											
Wateree-----	0-9	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	3
	9-17	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	
	17-28	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.20	.24	
	28-30	2-15	1.50-1.60	2-6	0.11-0.13	0.0-2.9	3.6-6.0	0.0-0.5	.17	.17	
	30-48	---	---	---	---	---	---	---	---	---	
	48-52	---	---	---	---	---	---	---	---	---	
Rion-----	0-5	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5
	5-19	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	19-48	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	48-55	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	55-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
WeE:											
Wateree-----	0-9	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	3
	9-17	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	
	17-28	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.20	.24	
	28-30	2-15	1.50-1.60	2-6	0.11-0.13	0.0-2.9	3.6-6.0	0.0-0.5	.17	.17	
	30-48	---	---	---	---	---	---	---	---	---	
	48-52	---	---	---	---	---	---	---	---	---	
Rion-----	0-5	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5
	5-19	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	19-48	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	48-55	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	55-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
WnC:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
WnD:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
WnE:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Rion-----	0-4	5-20	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.5	0.5-2.0	.24	.24	5
	4-12	5-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.24	.24	
	12-28	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	28-38	10-30	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
	38-80	8-25	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.5	0.0-0.5	.28	.28	
WrC:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Wake-----	0-4	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.20	.32	1
	4-12	2-12	1.55-1.65	6-20	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.20	.32	
	12-16	---	---	---	---	---	---	---	---	---	
WrD:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Wake-----	0-4	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.20	.32	1
	4-12	2-12	1.55-1.65	6-20	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.20	.32	
	12-16	---	---	---	---	---	---	---	---	---	
WrE:											
Wateree-----	0-7	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.20	.24	3
	7-27	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.1-0.5	.20	.24	
	27-30	2-15	1.50-1.60	6-20	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.2	.15	.20	
	30-45	---	---	---	---	---	---	---	---	---	
Wake-----	0-4	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.20	.32	1
	4-12	2-12	1.55-1.65	6-20	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.20	.32	
	12-16	---	---	---	---	---	---	---	---	---	
WrF:											
Wateree-----	0-9	5-18	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	3
	9-17	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.5-1.0	.20	.24	
	17-28	5-18	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.20	.24	
	28-30	2-15	1.50-1.60	2-6	0.11-0.13	0.0-2.9	3.6-6.0	0.0-0.5	.17	.17	
	30-48	---	---	---	---	---	---	---	---	---	
	48-52	---	---	---	---	---	---	---	---	---	

Soil Survey of Paulding County, Georgia

Table 17.--Physical and Chemical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Soil reaction	Organic matter	Erosion factors		
									Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	pH	Pct			
<b>WrF:</b>											
Wake-----	0-4	2-12	1.55-1.65	6-20	0.09-0.11	0.0-2.9	4.5-6.0	0.5-1.0	.20	.32	1
	4-12	2-12	1.55-1.65	6-20	0.08-0.10	0.0-2.9	4.5-6.0	0.0-0.2	.20	.32	
	12-16	---	---	---	---	---	---	---	---	---	
<b>WsC:</b>											
Waynesboro-----	0-6	28-40	1.40-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-7.0	0.5-2.0	.17	.17	5
	6-13	27-40	1.35-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-6.5	0.5-2.0	.32	.32	
	13-26	35-55	1.35-1.55	0.6-2	0.08-0.17	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
	26-72	35-55	1.35-1.55	0.6-2	0.09-0.18	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
<b>WsD:</b>											
Waynesboro-----	0-6	28-40	1.40-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-7.0	0.5-2.0	.17	.17	5
	6-13	27-40	1.35-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-6.5	0.5-2.0	.20	.32	
	13-26	35-55	1.35-1.55	0.6-2	0.08-0.17	0.0-2.9	4.5-5.5	0.5-1.0	.24	.20	
	26-72	35-55	1.35-1.55	0.6-2	0.09-0.18	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
<b>WsE:</b>											
Waynesboro-----	0-6	28-40	1.40-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-7.0	0.5-2.0	.17	.17	5
	6-13	27-40	1.35-1.55	0.6-2	0.13-0.18	0.0-2.9	4.5-6.5	0.5-2.0	.32	.32	
	13-26	35-55	1.35-1.55	0.6-2	0.08-0.17	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
	26-72	35-55	1.35-1.55	0.6-2	0.09-0.18	0.0-2.9	4.5-5.5	0.5-1.0	.20	.20	
<b>WtA:</b>											
Wehadkee-----	0-5	5-28	1.45-1.55	0.6-2	0.20-0.22	0.0-2.9	4.5-6.7	2.0-4.0	.32	.32	5
	5-15	10-37	1.40-1.55	0.6-2	0.17-0.22	0.0-2.9	4.5-6.7	0.0-1.0	.32	.32	
	15-25	10-35	1.45-1.55	0.6-2	0.17-0.19	0.0-2.9	4.5-6.7	0.0-1.0	.20	.20	
	25-38	10-28	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.7	0.0-0.5	.20	.20	
	38-56	5-35	1.40-1.65	0.6-2	0.15-0.17	0.0-2.9	4.5-6.7	0.0-0.2	.28	.28	
<b>WyB:</b>											
Wickham-----	0-7	8-19	1.50-1.60	2-6	0.12-0.14	0.0-2.9	4.5-6.0	0.5-2.0	.24	.24	5
	7-12	10-20	1.50-1.60	2-6	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
	12-54	18-35	1.45-1.55	0.6-2	0.15-0.17	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	
	54-80	8-15	1.50-1.60	0.6-2	0.11-0.13	0.0-2.9	4.5-6.0	0.0-0.5	.24	.24	

Soil Survey of Paulding County, Georgia

Table 18.--Taxonomic Classification of the Soils

Soil name	Family or higher taxonomic class
Agricola-----	Fine, kaolinitic, thermic Rhodic Kanhapludults
Allen-----	Fine-loamy, siliceous, semiactive, thermic Typic Paleudults
Altavista-----	Fine-loamy, mixed, semiactive, thermic Aquic Hapludults
Appling-----	Fine, kaolinitic, thermic Typic Kanhapludults
Aragon-----	Fine, kaolinitic, thermic Typic Hapludults
Braswell-----	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Cartecay-----	Coarse-loamy, mixed, semiactive, nonacid, thermic Aquic Udifluvents
Cedarbluff-----	Fine-loamy, siliceous, semiactive, thermic Fraguaquic Paleudults
Chewacla-----	Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts
Crawfordville-----	Fine, mixed, active, thermic Albaquultic Hapludalfs
Fruithurst-----	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Grover-----	Fine-loamy, micaceous, thermic Typic Hapludults
Hard Labor-----	Fine, kaolinitic, thermic Oxyaquic Kanhapludults
Helena-----	Fine, mixed, semiactive, thermic Aquic Hapludults
Lloyd-----	Fine, kaolinitic, thermic Rhodic Kanhapludults
Madison-----	Fine, kaolinitic, thermic Typic Kanhapludults
Mountain Park-----	Fine-loamy, micaceous, thermic Typic Hapludults
Musella-----	Loamy, mixed, subactive, thermic, shallow Typic Rhodudults
Pacolet-----	Fine, kaolinitic, thermic Typic Kanhapludults
Pettyjon-----	Fine-loamy, mixed, active, thermic Dystric Fluventic Eutrudepts
Poindexter-----	Fine-loamy, mixed, active, thermic Typic Hapludalfs
Rion-----	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Rowan-----	Fine-loamy, mixed, active, thermic Typic Hapludalfs
Sedgefield-----	Fine, mixed, active, thermic Aquultic Hapludalfs
Shady-----	Fine-loamy, mixed, subactive, thermic Typic Hapludults
Sipsey-----	Fine-loamy, siliceous, semiactive, thermic Typic Hapludults
Steadman-----	Fine-silty, mixed, active, thermic Fluvaquentic Eutrudepts
Sunlight-----	Loamy-skeletal, mixed, semiactive, thermic, shallow Inceptic Hapludults
Tallapoosa-----	Loamy, mixed, semiactive, thermic, shallow Typic Hapludults
Toccoa-----	Coarse-loamy, mixed, active, nonacid, thermic Typic Udifluvents
Wake-----	Mixed, thermic Lithic Udipsamments
Wateree-----	Coarse-loamy, mixed, semiactive, thermic Typic Dystrudepts
Waynesboro-----	Fine, kaolinitic, thermic Typic Paleudults
Wehadkee-----	Fine-loamy, mixed, active, nonacid, thermic Fluvaquentic Endoaquepts
Wickham-----	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Wilkes-----	Loamy, mixed, active, thermic, shallow Typic Hapludalfs
Wynott-----	Fine, mixed, active, thermic Typic Hapludalfs

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