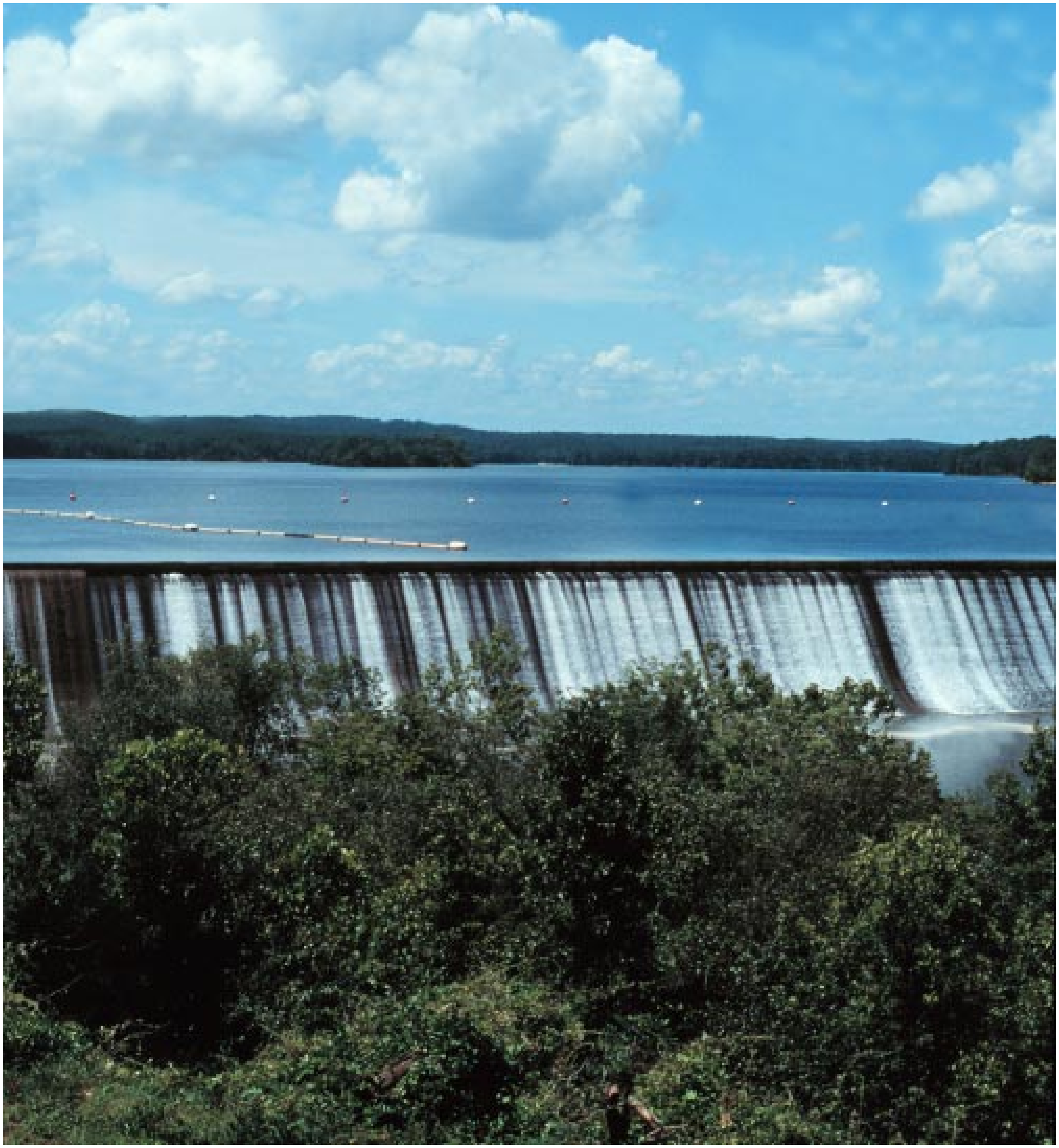
United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
North Carolina Department of Environment and Natural Resources, North Carolina Agricultural Research Service, North Carolina Cooperative Extension Service, Brown Creek Soil and Water Conservation District, and Anson County Board of Commissioners

Soil Survey of Anson County, North Carolina



How to Use This Soil Survey

General Soil Map

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

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

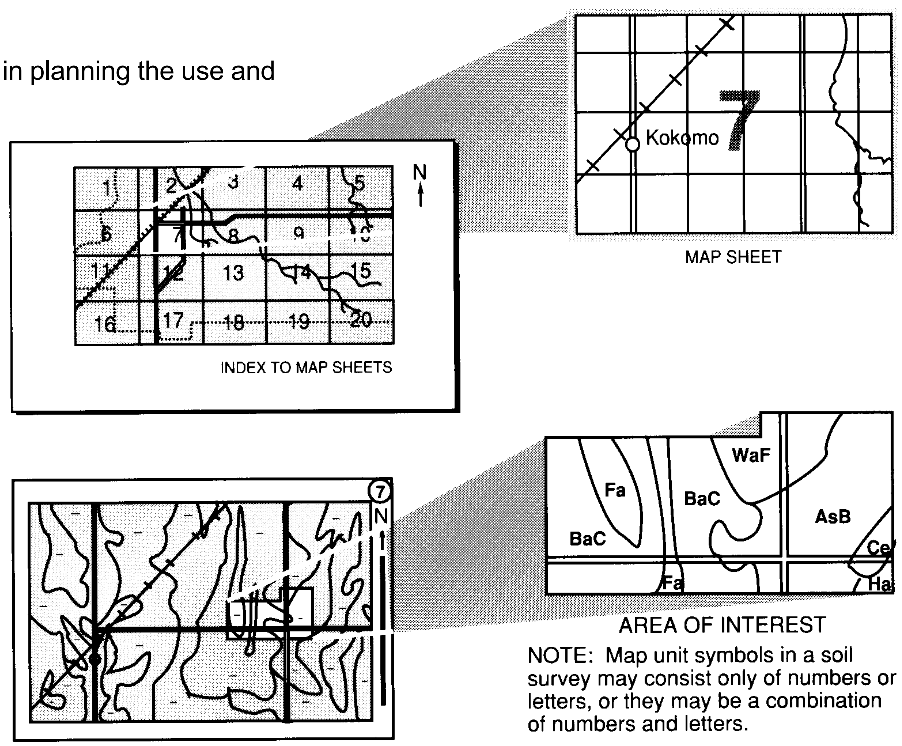
Detailed Soil Maps

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

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

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

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



MAP SHEET

AREA OF INTEREST

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

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

Major fieldwork for this soil survey was completed in 1998. Soil names and descriptions were approved in 1998. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1998. This soil survey was made cooperatively by the Natural Resources Conservation Service, the North Carolina Department of Environment and Natural Resources, the North Carolina Agricultural Research Service, the North Carolina Cooperative Extension Service, the Brown Creek Soil and Water Conservation District, and the Anson County Board of Commissioners. The survey is part of the technical assistance furnished to the Brown Creek Soil and Water Conservation District. The Anson County Board of Commissioners provided financial assistance for the survey.

Cover: Blewett Falls Dam, located on the Pee Dee River, was constructed in 1905. It supplies electric power and water to Anson County.

Additional information about the Nation's natural resources is available on the Natural Resources Conservation Service home page on the World Wide Web. The address is http://www.nrcs.usda.gov (click on "Technical Resources").

Contents

Issued 2005

Foreword

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

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

Various 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 decisions for land use or land treatment. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

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

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

Mary T. Kollstedt
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Anson County, North Carolina

By Dan G. Spangler and William E. Woody, Natural Resources Conservation Service

Soils surveyed by Dan G. Spangler, Kirk McEachern, and Richard Griffin,
Natural Resources Conservation Service, and by Harold Kelly and Richard Hayes,
North Carolina Department of Environment and Natural Resources

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
North Carolina Department of Environment and Natural Resources, North Carolina
Agricultural Research Service, North Carolina Cooperative Extension Service,
Brown Creek Soil and Water Conservation District, and Anson County Board of
Commissioners

ANSON COUNTY is in the south-central part of North Carolina (fig. 1). It is bordered by Union County to the west, Montgomery and Stanly Counties to the north, Richmond County to the east, and Chesterfield County, South Carolina, to the south. It is a major county for woodland production and has a significant gravel and sand industry *(3)*. In 1996, the population of Anson County was 23,474 and the population of Wadesboro, the county seat, was 3,645.

The total area of the county is 343,834 acres, or about 537 square miles. Elevation ranges from 85 feet above sea level, in the southeastern part of the county near McFarlan, where the Pee Dee River flows into South Carolina, to about 636 feet above sea level, at Gordon Mountain in the southwestern part of the county near White Store. The typography of the county ranges from nearly level to steep.

This soil survey updates the survey of Anson County published in 1915 *(10)*. It provides additional information and has larger maps, which show the soils in greater detail.

General Nature of the Survey Area

This section gives general information about Anson County. It describes the history and development, economic development, geology and water resources, and climate.

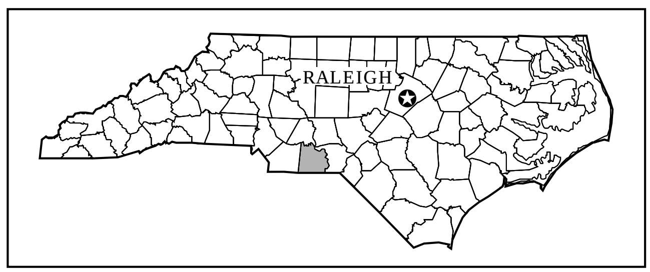


Figure 1.—Location of Anson County in North Carolina.

History and Development

The area that is now Anson County was originally inhabited by Indians of the Siouan, Catawba, Waxhaw, Cheraw, and Pee Dee tribes. Between 1730 and 1743, Scotch-Irish and German settlers begin arriving from Pennsylvania, Maryland, and Virginia by way of the Pee Dee River and the Philadelphia Wagon Road *(9)*.

In 1750, Anson County was formed from part of Bladen County. At that time, it extended westward from Drowning Creek, the western border of Moore County, to the Mississippi River. Anson County was later divided to form five other counties—Rowan County in 1753, Mecklenburg County in 1762, Richmond and Montgomery Counties in 1779, and Union County in 1842. The county was named for Lord George Anson,

Figure 2.—Hugh Hammond Bennett, "The Father of Soil Conservation," was born in Anson County, North Carolina.

First Lord of the British Admiralty, who was also known as "The Father of the British Navy" *(9)* and was noted as a global navigator.

The growth of Anson County was slow between 1800 and the end of the Civil War. Because of a typhoid epidemic in 1830 and falling crop prices in 1833, many inhabitants moved west to Tennessee and Mississippi. The arrival of the railroad in 1874 opened Anson County's cotton market to the rest of the country and brought other business development, such as a hardware company and a gravel and stone mining company *(3)*.

One interesting historical note about Anson County is that Dr. Hugh Hammond Bennett, known as "The Father of Soil Conservation," was born on April 15, 1881, on a farm between Wadesboro and White Store (fig. 2). He graduated from the University of North Carolina in 1903 with a degree in chemistry.

Bennett first worked as a soil surveyor with the Bureau of Soils of the United States Department of Agriculture *(9)*. Observing that soil erosion ruined much good land throughout the United States, Bennett slowly initiated a program to prevent this waste. In 1933, he was made Chief of the Soil Erosion Service. By this time, soil conservation was a national concern, largely because of the efforts of Hugh Bennett and his associates. In 1935, he was appointed Chief of the Soil Conservation Service, which he remained until his retirement in 1951 *(5)*. Today, the agency is known as the Natural Resources Conservation Service.

Hugh Hammond Bennett's birthplace, 2 miles west of Wadesboro, is owned by the North Carolina Chapter of the Soil and Water Conservation Society and has been made into a memorial to him.

The first soil conservation district in America was established in Anson County in 1937 and named the Brown Creek Conservation District because it embraced the area of the Brown Creek Watershed. The success of the soil conservation district program was due to the participation of local farmers. Eventually, conservation districts were created throughout the United States.

Economic Development

Steve Leary, Director of Economic Development, Anson County Chamber of Commerce, helped prepare this section.

Historically, Anson County has been a land of farms and forests *(9)*. There have been changes, especially in recent years, in local farming operations and the development of modern industry. The population of Anson County has remained steady since 1974. Today, both agriculture and textile-related industry play an important role in the county's economy.

Anson County's early economy depended on agriculture, especially cotton, grown on uplands and rich bottom land which was cleared after the end of the Revolutionary War. Cotton and other goods were shipped to the South Carolina coast by river and by road until the 1870's. In the 1870's, the arrival of the railroad in Anson County opened many other markets.

An attempt to connect Sneedsborough, a thriving river town in southeastern Anson County, to the Cape Fear River and the North Carolina coast by a series of canals failed due to poor financing and the lack of technical expertise. Sneedsborough eventually disappeared completely as the railroads replaced barges as the local heavy haulers.

By the 1890's, the railroads had encouraged the development of several textile mills. Also, cut stone and gravel was being shipped from Anson County to

Figure 3.—Sand and gravel pits near Lilesville, in an area of Lillington and Fuquay soils. More than 3,000 acres of pits have been dug in Anson County since the early 1900's.

eastern cities. Today, active gravel pits are still located in the east-central part of the county, primarily on Lillington soils, in areas around Lilesville and the Pee Dee River (fig. 3).

In the 1930's, because of falling cotton prices and the destructive boll weevil, many Anson County farmers started producing timber; growing soybeans, wheat, and corn; and raising poultry. Most of the former cotton fields are now planted in pine, although cotton is making a small comeback and a new cotton gin was built a few years ago. Severe erosion of soils that were used for cotton also resulted in the planting of pines on much of the agricultural land. Modern farm practices are better at preventing soil erosion, and cotton operations are now more productive.

The textile industry remains the backbone of the local economy, and investment in modern equipment has allowed factories in the county to compete in a global market. Current industries also include metal working and metal fabricating plants.

Geography and Water Resources

The soils of Anson County formed from four different geologic formations—the Carolina Slate Belt, the Triassic Basin, Acid Crystalline, and the Upper Coastal Plain Sediments.

The Pee Dee River, the Rocky River, and their adjacent tributaries, including Lanes Creek, Brown Creek, Jones Creek, and Richardson Creek, are the main water resources. Water for livestock, irrigation, and recreational purposes is provided by more than 2,500 impounded ponds and by creeks and streams.

Blewett Falls, a 2,500-acre lake constructed in 1905 on the Pee Dee River, is the largest surface water impoundment in Anson County. Anson County's water system, drawn from Blewett Falls, provides the county with an abundant water supply. The county manufactures more than 10 million gallons of water a day in excess of its needs. U.S. Highway 52 and U.S. Highway 74 corridors are served by 24-inch water lines.

Climate

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

In winter, the average temperature is 42.6 degrees F and the average daily minimum temperature is 31.9 degrees. The lowest temperature on record, which occurred on January 21, 1985, is -4 degrees. In summer, the average temperature is 77.8 degrees and the average daily maximum temperature is 88.3 degrees. The highest recorded temperature, which occurred on August 22, 1983, is 107 degrees.

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

The total average annual precipitation is 47.04 inches. Of this, 28.0 inches, or about 59 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 6.39 inches on July 4, 1981. Thunderstorms occur on about 41 days each year, and most occur between May and August.

The average seasonal snowfall is 5.0 inches. The greatest snow depth at any one time during the period of record was 11 inches. On the average, 3 days of the year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 8.0 inches on December 17, 1973.

The average relative humidity in midafternoon is about 54 percent. Humidity is higher at night, and the average at dawn is about 83 percent. The sun shines 67 percent of the time possible in summer and 57 percent in winter. The prevailing wind is from the southwest for most of the year, except during September and October, when it is from the northeast. Average windspeed is highest, about 9 miles per hour, in March and April.

How This Survey Was Made

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

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they 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-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 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 the soils. After describing the soils 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 are generally collected for laboratory analyses and for engineering tests. The data from these analyses and tests and from field-observed characteristics and soil properties are used to predict behavior of the soils under different uses. Interpretations are field tested through observation of the soils in different uses under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

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

General Soil Map Units

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

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

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

1. Goldston-Badin

Gently sloping to steep, well drained soils that have a loamy surface layer and a loamy or clayey subsoil

Setting

Location in the survey area: Northern and western parts of the county
Landscape: Carolina Slate Belt region of the Piedmont
Landform: Broad ridges and hillslopes
Landform position: Interfluves and side slopes
Slope range: 2 to 45 percent

Composition

Percent of the survey area: 23
Goldston soils—44 percent
Badin soils—41 percent
Minor soils (including Chewacla, Tarrus, Misenheimer, and Callison soils)—15 percent

Soil Characteristics

Goldston

Surface layer: Dark grayish brown channery silt loam
Subsurface layer: Pale brown channery silt loam
Subsoil: Yellowish brown very channery silt loam
Bedrock: Slate
Depth class: Shallow
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 45 percent
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt

Badin

Surface layer: Yellowish brown channery silt loam
Subsoil: Upper part—reddish yellow silty clay loam that has pink mottles; middle part—red silty clay; lower part—yellowish red silty clay loam that has olive yellow and red mottles
Underlying material: Mottled red, yellowish red, and light gray saprolite
Bedrock: Argillite
Depth class: Moderately deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 25 percent
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt

Minor soils

- The somewhat poorly drained Chewacla soils on flood plains and along drainageways
- Random areas of Tarrus soils that have soft bedrock at a depth of 40 to 60 inches
- The moderately well drained Misenheimer and Callison soils in depressional areas and along drainageways

Use and Management

Major Uses: Cropland and woodland

Agricultural Development

Cropland

Management concerns: Goldston—erodibility, droughtiness, rooting depth, soil fertility, and slope in the steeper areas; Badin—erodibility, soil fertility, and slope in the steeper areas

Pasture and hayland

Management concerns: Goldston—droughtiness, rooting depth, and soil fertility; Badin—erodibility and soil fertility

Woodland

Management concerns: Erodibility, windthrow hazard, and slope in the steeper areas

Urban Development

Dwellings

Management concerns: Goldston—depth to bedrock and slope in the steeper areas; Badin—shrink-swell potential and slope in the steeper areas

Septic tank absorption fields

Management concerns: Depth to bedrock and slope in the steeper areas

Local roads and streets

Management concerns: Goldston—depth to bedrock and slope in the steeper areas; Badin—low strength and slope in the steeper areas

2. Mayodan-Polkton-White Store

Gently sloping to moderately steep, well drained and moderately well drained soils that have a loamy surface layer and a clayey subsoil

Setting

Location in the survey area: South-central part of the county
Landscape: Triassic Basin region of the Piedmont
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves and side slopes
Slope range: 2 to 25 percent

Composition

Percent of the survey area: 18
Mayodan soils—26 percent
Polkton soils—22 percent
White Store soils—20 percent
Minor soils (including Chewacla, Creedmoor, Pinoka, Hornsboro, and Wadesboro soils)—32 percent

Soil Characteristics

Mayodan

Surface layer: Yellowish brown fine sandy loam
Subsurface layer: Yellowish red sandy clay loam that has light yellowish brown mottles
Subsoil: Upper part—yellowish red clay that has yellowish red mottles; middle part—yellowish red clay that has reddish yellow mottles; lower part—reddish yellow sandy clay loam that has red, reddish yellow, and pinkish gray mottles
Underlying material: Mottled reddish yellow, red, and pinkish gray sandy clay loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 25 percent
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, shale, and conglomerate of the Triassic Basin

Polkton

Surface layer: Reddish brown sandy clay loam
Subsoil: Upper part—red clay that has brown mottles; middle part—red clay that has brown and light gray mottles; lower part—dark reddish brown clay loam
Bedrock: Triassic siltstone
Depth class: Moderately deep
Drainage class: Moderately well drained
Seasonal high water table: At a depth of 1.5 to 2.5 feet from December through March
Slope range: 2 to 25 percent
Parent material: Triassic siltstone, sandstone, shale, and mudstone

White Store

Surface layer: Yellowish red clay loam
Subsoil: In sequence downward, red clay, red clay that has pinkish gray mottles, red clay, and dark reddish clay loam
Bedrock: Triassic siltstone
Depth class: Deep
Drainage class: Moderately well drained
Seasonal high water table: At a depth of 1.0 to 1.5 feet from December through March
Slope range: 2 to 25 percent
Parent material: Triassic siltstone, sandstone, shale, and mudstone

Minor soils

- The somewhat poorly drained Chewacla soils on flood plains and along drainageways

- Random areas of soils that have soft bedrock at a depth of less than 20 inches
- Random areas of the moderately well drained Creedmoor soils in gently sloping areas
- Random areas of the well drained Pinoka soils that have less clay in the subsoil than the major soils
- Random areas of the somewhat poorly drained Hornsboro soils on nearby terraces
- Random areas of the well drained Wadesboro soils that have a dark red subsoil and have soft bedrock at a depth of 40 to 60 inches; in the less sloping areas

Use and Management

Major Uses: Woodland

Agricultural Development

Cropland

Management concerns: Mayodan—erodibility, soil fertility, and slope in the steeper areas; Polkton and White Store—erodibility, root penetration, soil fertility, and slope in the steeper areas

Pasture and hayland

Management concerns: Mayodan—erodibility, soil fertility, and slope in the steeper areas; Polkton and White Store—erodibility, root penetration, soil fertility, and slope in the steeper areas

Woodland

Management concerns: Mayodan—erodibility and slope in the steeper areas; Polkton and White Store—erodibility, seedling survival, windthrow hazard, and slope in the steeper areas

Urban Development

Dwellings

Management concerns: Mayodan—shrink-swell potential and slope in the steeper areas; Polkton and White Store—shrink-swell potential, wetness, and slope in the steeper areas

Septic tank absorption fields

Management concerns: Mayodan—permeability and slope in the steeper areas; Polkton—depth to bedrock, restricted permeability, wetness, and slope in the steeper areas; White Store—restricted permeability, wetness, and slope in the steeper areas

Local roads and streets

Management concerns: Mayodan—low strength and slope in the steeper areas; Polkton and White Store—shrink-swell potential, low strength, and slope in the steeper areas

3. Pacolet

Gently sloping to steep, well drained soils that have a gravelly loam or loamy surface layer and a loamy or clayey subsoil

Setting

Location in the survey area: Eastern and southeastern parts of the county
Landscape: Piedmont
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves, nose slopes, and side slopes
Slope range: 2 to 45 percent

Composition

Percent of the survey area: 16
Pacolet soils—87 percent
Minor soils (including Chewacla and Cecil soils)—13 percent

Soil Characteristics

Pacolet

Surface layer: Brown gravelly sandy loam
Subsoil: Upper part—red gravelly clay loam; lower part—red gravelly fine sandy loam
Underlying material: Mottled red and yellowish red gravelly fine sandy loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 45 percent
Parent material: Porphyritic granite

Minor soils

- The somewhat poorly drained Chewacla soils on flood plains and along drainageways
- Random areas of Cecil soils that have a clayey subsoil more than 30 inches thick; in gently sloping to strongly sloping areas

Use and Management

Major Uses: Woodland, cropland, pasture, and hayland

Agricultural Development

Cropland

Management concerns: Erodibility, soil fertility, and slope in the steeper areas

Pasture and hayland

Management concerns: Erodibility, soil fertility, and slope in the steeper areas

Woodland

Management concerns: Slope and erodibility in the steeper areas

Urban Development

Dwellings

Management concerns: Slope in the steeper areas

Septic tank absorption fields

Management concerns: Permeability and slope in the steeper areas

Local roads and streets

Management concerns: Low strength and slope in the steeper areas

4. Badin-Tarrus-Nanford

Gently sloping to strongly sloping, well drained soils that have a loamy or gravelly loam surface layer and a clayey subsoil

Setting

Location in the survey area: Southern and northeastern parts of the county
Landscape: Carolina Slate Belt region of the Piedmont
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves and side slopes
Slope range: 2 to 15 percent

Composition

Percent of the survey area: 8
Badin soils—60 percent
Tarrus soils—15 percent
Nanford soils—9 percent
Minor soils (including Georgeville and Goldston soils)—16 percent

Soil Characteristics

Badin

Surface layer: Yellowish red silty clay loam
Subsoil: Upper part—red silty clay that has reddish yellow mottles; lower part—red channery silty clay loam that has reddish yellow mottles
Bedrock: Argillite
Depth class: Moderately deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 15 percent
Parent material: Argillite and other fine-grained rocks of the Carolina Slate Belt

Tarrus

Surface layer: Strong brown gravelly silt loam that has yellowish red mottles
Subsoil: In sequence downward, red silty clay, red clay, red silty clay that has reddish yellow and reddish brown mottles, and red silty clay loam that has reddish yellow and reddish brown mottles
Underlying material: Mottled red, brownish yellow, and light gray silt loam saprolite
Bedrock: Slate
Depth class: Deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 15 percent
Parent material: Argillite and other fine-grained rocks of the Carolina Slate Belt

Nanford

Surface layer: Brown silt loam
Subsoil: Upper part—yellowish red silty clay; middle part—yellowish red silty clay that has brownish yellow and red mottles; lower part—red silty clay loam that has brownish yellow mottles
Underlying material: Mottled brown, red, and brownish yellow silt loam saprolite
Bedrock: Schist
Depth class: Deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 15 percent
Parent material: Schist and other fine-grained rocks of the Carolina Slate Belt

Minor soils

- Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches
- Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls

Use and Management

Major Uses: Cropland and woodland

Agricultural Development

Cropland

Management concerns: Erodibility and soil fertility

Pasture and hayland

Management concerns: Erodibility, soil fertility, and slope in the steeper areas

Woodland

Management concerns: Badin—erodibility, equipment use, seedling survival, and windthrow hazard; Tarrus and Nanford—no major limitations

Urban Development

Dwellings

Management concerns: Badin—depth to bedrock, shrink-swell potential, and slope in the steeper areas; Tarrus and Nanford—shrink-swell potential and slope in the steeper areas

Septic tank absorption fields

Management concerns: Badin—depth to bedrock and slope in the steeper areas; Tarrus and Nanford—permeability, depth to bedrock, and slope in the steeper areas

Local roads and streets

Management concerns: Low strength and slope in the steeper areas

5. Ailey-Emporia-Candor

Nearly level to strongly sloping, well drained soils that have a sandy surface layer and a sandy or loamy subsoil

Setting

Location in the survey area: Southeastern part of the county
Landscape: Sandhills and Upper Coastal Plain
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves, nose slopes, and side slopes
Slope range: 1 to 15 percent

Composition

Percent of the survey area: 12
Ailey soils—27 percent
Emporia soils—25 percent
Candor soils—10 percent
Minor soils (including Udorthents and Fuquay, Johnston, Lillington, Vaucluse, Wakulla, Pelion, and Dothan soils)—38 percent

Soil Characteristics

Ailey

Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—yellowish brown sandy clay loam that has strong brown mottles; middle part—yellowish brown sandy clay loam that has yellowish red mottles; lower part—strong brown sandy clay loam that has yellowish red mottles
Underlying material: Red sandy loam that has strong brown mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 15 percent
Parent material: Loamy marine sediments

Emporia

Surface layer: Pale brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—yellowish brown sandy clay loam; lower part—yellowish brown sandy loam that has light gray and red mottles
Underlying material: Yellowish brown, red, and light gray sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of 3.0 to 4.5 feet from November through April
Slope range: 2 to 10 percent
Parent material: Loamy and clayey marine sediments

Candor

Surface layer: Dark grayish brown sand
Subsurface layer: Light yellowish brown sand
Subsoil: In sequence downward, yellowish brown loamy sand, brownish yellow sand, yellow sand that has strong brown mottles, strong brown sandy loam that has brownish yellow mottles, and strong brown sandy clay loam that has light gray mottles
Depth class: Very deep
Drainage class: Somewhat excessively drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 1 to 15 percent
Parent material: Sandy marine sediments

Minor soils

- Udorthents that have a loamy subsoil; in gravel mining areas
- Fuquay and Dothan soils that have a loamy subsoil with 5 percent plinthite; in nearly level and gently sloping areas
- The very poorly drained Johnston soils on flood plains and along drainageways

- Random areas of Lillington soils that have a loamy subsoil and a gravelly surface layer; in nearly level and gently sloping areas
- Random areas of Vaucluse soils that have a slowly permeable brittle layer in the subsoil
- Random areas of Wakulla soils that have a subsoil that is sandy throughout; in nearly level and gently sloping areas
- The moderately well drained Pelion soils in low-lying depressional areas

Use and Management

Major Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Management concerns: Ailey—droughtiness, soil fertility, and soil blowing; Emporia—erodibility and soil fertility; Candor—droughtiness, nutrient leaching, and soil blowing

Pasture and hayland

Management concerns: Ailey—droughtiness, soil fertility, and soil blowing; Emporia—erodibility and soil fertility; Candor—droughtiness, nutrient leaching, and soil blowing

Woodland

Management concerns: Ailey—seedling survival, equipment use, and windthrow hazard; Emporia—seeding survival; Candor—seedling survival and equipment use

Urban Development

Dwellings

Management concerns: Ailey—slope in the steeper areas; Emporia—wetness and shrink-swell potential; Candor—slope in the steeper areas and wetness

Septic tank absorption fields

Management concerns: Ailey—permeability; Emporia—wetness and permeability; Candor—poor filtering capacity

Local roads and streets

Management concerns: Ailey and Candor—slope in the steeper areas; Emporia—low strength and slope in the steeper areas

6. Pinoka-Mayodan

Gently sloping to moderately steep, well drained soils that have a loamy surface layer and a loamy or clayey subsoil

Setting

Location in the survey area: North-central part of the county
Landscape: Triassic Basin region of the Piedmont
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves and side slopes
Slope range: 2 to 30 percent

Composition

Percent of the survey area: 9
Pinoka soils—30 percent
Mayodan soils—27 percent
Minor soils (including White Store, Creedmoor, Polkton, and Carbonton soils)—43 percent

Soil Characteristics

Pinoka

Surface layer: Dark grayish brown sandy loam
Subsurface layer: Brown sandy loam
Subsoil: Yellowish red sandy loam that has areas of clay loam
Bedrock: Triassic sandstone
Depth class: Moderately deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 30 percent
Parent material: Sandstone, mudstone, siltstone, conglomerate, or shale

Mayodan

Surface layer: Strong brown gravelly sandy loam
Subsoil: Upper part—red clay; middle part—red clay that has reddish yellow mottles; lower part—mottled red, yellow, and light gray clay loam
Underlying material: Mottled yellow, red, and light gray loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 25 percent
Parent material: Conglomerate

Minor soils

- Random areas of the moderately well drained White Store and Polkton soils that have a very slowly permeable subsoil

- The moderately well drained Creedmoor soils in gently sloping areas
- The somewhat poorly drained Carbonton soils in gently sloping areas

Use and Management

Major Uses: Woodland

Agricultural Development

Cropland

Management concerns: Pinoka—erodibility, droughtiness, rooting depth, soil fertility, and slope in the steeper areas; Mayodan—erodibility, soil fertility, and slope in the steeper areas

Pasture and hayland

Management concerns: Pinoka—erodibility, droughtiness, rooting depth, soil fertility, and slope in the steeper areas; Mayodan—erodibility, soil fertility, and slope in the steeper areas

Woodland

Management concerns: Pinoka—erodibility, seedling survival, windthrow hazard, and slope in the steeper areas; Mayodan—erodibility and slope in the steeper areas

Urban Development

Dwellings

Management concerns: Pinoka—depth to bedrock and slope in the steeper areas; Mayodan—shrink-swell potential and slope in the steeper areas

Septic tank absorption fields

Management concerns: Pinoka—depth to bedrock and slope in the steeper areas; Mayodan—shrink-swell potential and slope in the steeper areas

Local roads and streets

Management concerns: Pinoka—depth to bedrock and slope in the steeper areas; Mayodan—low strength and slope in the steeper areas

7. Chewacla-Shellbluff-Riverview

Nearly level, well drained and somewhat poorly drained soils that have a loamy surface layer and a loamy subsoil

Setting

Location in the survey area: Throughout the county
Landscape: Upper Coastal Plain, Piedmont, and Sandhills
Landform: Flood plains
Landform position: Chewacla—planar to slightly concave slopes; Shellbluff and Riverview—planar to slightly convex slopes
Slope range: 0 to 2 percent

Composition

Percent of the survey area: 8
Chewacla soils—70 percent
Shellbluff soils—10 percent
Riverview soils—8 percent
Minor soils (including Chastain, Tetotum, and State soils)—12 percent

Soil Characteristics

Chewacla

Surface layer: Brown loam
Subsoil: Upper part—brown silty clay loam; middle part—dark yellowish brown sandy clay loam that has dark gray mottles; lower part—light brownish gray clay loam that has brownish yellow and brown mottles
Underlying material: Light brownish gray loamy fine sand that has yellowish red and brown mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: At a depth of 0.5 foot to 1.5 feet from November through April
Slope range: 0 to 2 percent
Parent material: Recent alluvial sediments

Shellbluff

Surface layer: Dark yellowish brown loam
Subsoil: Upper part—strong brown silty clay loam; lower part—brown silty clay loam
Underlying material: Brown silty clay loam that has light yellowish brown mottles
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of 3.0 to 5.0 feet from December through March
Slope range: 0 to 2 percent
Parent material: Recent alluvial sediments

Riverview

Surface layer: Brown loam
Subsoil: Strong brown loam that has reddish yellow mottles
Underlying material: Upper part—brown fine sandy loam; middle part—brown loamy fine sand that

has strong brown mottles; lower part—brown loam that has strong brown mottles
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of 3.0 to 5.0 feet from December through March
Slope range: 0 to 2 percent
Parent material: Recent alluvial sediments

Minor soils

- The poorly drained Chastain soils that have a clayey subsoil; in low-lying depressional areas
- The moderately well drained Tetotum soils in adjacent terrace positions
- The well drained State soils in adjacent terrace positions

Use and Management

Major Uses: Woodland and cropland

Agricultural Development

Cropland

Management concerns: Chewacla—flooding and wetness; Shellbluff and Riverview—occasional flooding

Pasture and hayland

Management concerns: Chewacla—flooding and wetness; Shellbluff and Riverview—occasional flooding

Woodland

Management concerns: Chewacla—equipment use and windthrow hazard; Shellbluff and Riverview—no significant limitations

Urban Development

Dwellings

Management concerns: Chewacla—flooding and wetness; Shellbluff and Riverview—flooding

Septic tank absorption fields

Management concerns: Flooding and wetness

Local roads and streets

Management concerns: Chewacla—low strength, flooding, and wetness; Shellbluff—low strength and flooding; Riverview—flooding

8. Mayodan-Creedmoor-Claycreek

Nearly level to strongly sloping, well drained and somewhat poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil

Setting

Location in the survey area: North-central part of the county
Landscape: Triassic Basin region of the Piedmont
Landform: Mayodan—broad ridges and hillslopes; Creedmoor—broad ridges; Claycreek—broad upland flats
Landform position: Mayodan—interfluves, side slopes, and nose slopes; Creedmoor and Claycreek—interfluves
Slope range: 0 to 15 percent

Composition

Percent of the survey area: 5
Mayodan soils—39 percent
Creedmoor soils—30 percent
Claycreek soils—21 percent
Minor soils (including Granville and Worsham soils)—10 percent

Soil Characteristics

Mayodan

Surface layer: Yellowish brown fine sandy loam
Subsurface layer: Yellowish red sandy clay loam that has light yellowish brown mottles
Subsoil: Upper part—yellowish red clay that has yellowish red mottles; middle part—yellowish red clay that has reddish yellow mottles; lower part—reddish yellow sandy clay loam that has red, reddish yellow, and pinkish gray mottles
Underlying material: Mottled reddish yellow, red, and pinkish gray sandy clay loam saprolite
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6.0 feet
Slope range: 2 to 15 percent
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, and shale of the Triassic Basin

Creedmoor

Surface layer: Yellowish brown fine sandy loam
Subsoil: Upper part—brownish yellow sandy clay loam that has very pale brown mottles; middle

part—yellowish brown clay that has light brownish gray mottles; lower part—light gray clay that has yellowish brown and reddish brown mottles
Underlying material: Dark reddish brown sandy clay loam saprolite that has light gray mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: At a depth of 1.5 to 2.0 feet from January through March
Slope range: 2 to 8 percent
Parent material: Residuum weathered from sandstone, mudstone, and siltstone of the Triassic Basin

Claycreek

Surface layer: Brown fine sandy loam
Subsoil: In sequence downward, yellow silt loam that has brownish yellow mottles, brownish yellow silt loam that has gray mottles, yellowish brown clay loam that has light gray mottles, and light gray clay loam that has yellowish brown mottles
Underlying material: Light gray sandy clay loam saprolite that has yellowish brown mottles
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: At a depth of 1.5 to 2.0 feet from January through March
Slope range: 0 to 2 percent
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, and shale of the Triassic Basin

Minor soils

- Random areas of the well drained Granville soils that have less clay in the subsoil than the major soils
- The poorly drained Worsham soils in depressional areas and along drainageways

Use and Management

Major Uses: Cropland and woodland

Agricultural Development

Cropland

Management concerns: Mayodan—erodibility and soil fertility; Creedmoor and Claycreek—wetness and soil fertility

Pasture and hayland

Management concerns: Mayodan—erodibility and soil fertility; Creedmoor and Claycreek—wetness and soil fertility

Woodland

Management concerns: No significant limitations

Urban Development

Dwellings

Management concerns: Mayodan—shrink-swell potential and slope in the steeper areas; Creedmoor and Claycreek—wetness

Septic tank absorption fields

Management concerns: Mayodan—permeability and slope in the steeper areas; Creedmoor and Claycreek—wetness and permeability

Local roads and streets

Management concerns: Low strength

9. Tetotum-Hornsboro-McQueen

Nearly level to strongly sloping, well drained to somewhat poorly drained soils that have a loamy surface layer and a loamy or clayey subsoil

Setting

Location in the survey area: Northern and eastern parts of the county
Landscape: Piedmont, Upper Coastal Plain, Sandhills, and Triassic Basin
Landform: Tetotum and Hornsboro—low terraces along major streams; McQueen—high terraces along major streams
Landform position: Tetotum and McQueen—planar to slightly convex slopes; Hornsboro—planar to slightly concave slopes
Slope range: 0 to 6 percent

Composition

Percent of the survey area: 1
Tetotum soils—32 percent
Hornsboro soils—26 percent
McQueen soils—18 percent
Minor soils (including Hiwassee, Roanoke, and State soils)—24 percent

Soil Characteristics

Tetotum

Surface layer: Yellowish brown silt loam
Subsoil: In sequence downward, yellowish brown clay loam, yellowish brown silty clay loam that has

dark yellowish brown and strong brown mottles, brownish yellow clay loam that has light gray mottles, and brownish yellow silty clay loam that has light gray mottles
Underlying material: Mottled light gray and brownish yellow loam
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: At a depth of 1.5 to 2.5 feet from December through April
Slope range: 0 to 3 percent
Parent material: Alluvium

Hornsboro

Surface layer: Dark yellowish brown silt loam
Subsurface layer: Yellowish brown loam
Subsoil: In sequence downward, light yellowish brown clay that has yellowish brown mottles, mottled yellowish brown and gray clay, yellowish brown clay that has gray and brownish yellow mottles, gray clay that has yellowish brown mottles, and mottled gray and yellowish brown sandy clay loam
Underlying material: Mottled light gray, yellowish brown, and brown fine sandy loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: At a depth of 1.0 to 1.5 feet from November through May
Slope range: 0 to 2 percent
Parent material: Alluvium

McQueen

Surface layer: Brown loam
Subsoil: Upper part—red clay; middle part—red clay that has strong brown and yellowish red mottles; lower part—red silty clay loam that has strong brown and yellowish red mottles
Underlying material: Strong brown silt loam
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of 4.0 to 6.0 feet from January through March
Slope range: 1 to 6 percent
Parent material: Alluvium

Minor soils

- The well drained Hiwassee soils that have a dark red subsoil; in the slightly higher positions
- The poorly drained Roanoke soils in the slightly lower-lying positions
- Random areas of the well drained State soils that have a loamy subsoil

Use and Management

Major Uses: Cropland and woodland

Agricultural Development

Cropland

Management concerns: Tetotum—flooding, wetness, and soil fertility; Hornsboro—ponding and wetness; McQueen—erodibility and soil fertility

Pasture and hayland

Management concerns: Tetotum—flooding, wetness, and soil fertility; Hornsboro—ponding and wetness; McQueen—erodibility and soil fertility

Woodland

Management concerns: Tetotum—equipment use; Hornsboro—equipment use and seedling survival; McQueen—no significant limitations

Urban Development

Dwellings

Management concerns: Tetotum—flooding; Hornsboro—flooding, wetness, and shrink-swell potential; McQueen—shrink-swell potential

Septic tank absorption fields

Management concerns: Tetotum—wetness; Hornsboro—wetness and permeability; McQueen—permeability

Local roads and streets

Management concerns: Tetotum—low strength and wetness; Hornsboro—shrink-swell potential and low strength; McQueen—low strength

Detailed Soil Map Units

The map units delineated on the detailed maps 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. More information about each map unit is given under the heading “Use and Management of the Soils.”

A map unit delineation on a 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 or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas 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 “included” areas that belong to other taxonomic classes.

Most included 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, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. 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 included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas 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 included areas 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, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

Soils of one series can differ in texture of the surface layer, slope, stoniness, wetness, frequency of flooding, 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, Mayodan fine sandy loam, 2 to 8 percent slopes, is a phase of the Mayodan series.

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

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Polkton-White Store complex, 2 to 8 percent slopes, severely eroded, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Chewacla and Chastain soils, 0 to 2 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas.* Such areas have little or no soil material and support little or no vegetation. Dam is an example. Some miscellaneous areas are very small and are identified by a special symbol on the soil maps.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Contents") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

AeB—Ailey loamy sand, 2 to 8 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 500 acres

Composition

Ailey soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 9 inches—brown loamy sand

Subsurface layer:
9 to 22 inches—light yellowish brown loamy sand

Subsoil:
22 to 30 inches—yellowish brown sandy clay loam that has strong brown mottles
30 to 40 inches—yellowish brown sandy clay loam that has yellowish red mottles
40 to 54 inches—strong brown sandy clay loam that has yellowish red mottles

Underlying material:
54 to 62 inches—red sandy loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part of the subsoil and slow in the lower part
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Slight
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Emporia soils that have sandy surface layers less than 20 inches thick; in the steeper areas
• Fuquay soils that have more than 5 percent plinthite in the lower part of the subsoil; in nearly level areas and along the edge of broad upland flats
• Random areas of Vaucluse soils that have sandy surface layers less than 20 inches thick
• Random areas of soils that are similar to the Ailey soil but have a perched high water table between depths of 4 and 6 feet
• Random areas of the somewhat excessively drained and rapidly permeable Candor soils
• Random areas of Lillington soils that have a gravelly surface layer and a very gravelly subsoil
• Random areas of soils that have sandy surface layers more than 40 inches thick

Similar inclusions:
• Random areas of Ailey soils that have a sand surface layer

Land Use

Dominant Uses: Cropland and pasture (fig. 4)
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Soil blowing, equipment use, droughtiness, and soil fertility

Figure 4.—Hay bales of coastal bermudagrass on Ailey loamy sand, 2 to 8 percent slopes, near Morven.

Management measures and considerations:
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Bermudagrass and fescue grass
Management concerns: Soil blowing, droughtiness, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Using wide-tire or crawler-type equipment and harvesting trees in the drier summer months help to improve trafficability.

• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Periodically harvesting windthrown trees helps to improve the productivity of this sandy soil.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting urban development
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 9S, based on loblolly pine as the indicator species

AeC—Ailey loamy sand, 8 to 15 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 5 to 150 acres

Composition

Ailey soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 9 inches—brown loamy sand

Subsurface layer:
9 to 22 inches—light yellowish brown loamy sand

Subsoil:
22 to 30 inches—yellowish brown sandy clay loam that has strong brown mottles
30 to 40 inches—yellowish brown sandy clay loam that has yellowish red mottles
40 to 54 inches—strong brown sandy clay loam that has yellowish red mottles

Underlying material:
54 to 62 inches—red sandy loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part of the subsoil and slow in the lower part
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Moderate
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Emporia soils that have sandy surface layers less than 20 inches thick; on shoulder slopes
• Random areas of Vaucluse soils that have sandy surface layers less than 20 inches thick
• Random areas of soils that are similar to the Ailey soil but have a perched water table between depths of 4 and 6 feet
• Random areas of Lillington soils that have a gravelly surface layer and a very gravelly subsoil
• Random areas of soils that have sandy surface layers more than 40 inches thick

Similar inclusions:
• Random areas of Ailey soils that have a sand surface layer

Agricultural Development

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Soil blowing, equipment use, droughtiness, and soil fertility
Management measures and considerations:
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Bermudagrass and fescue grass
Management concerns: Soil blowing, droughtiness, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Using wide-tire or crawler-type equipment and harvesting trees in the drier summer months help to improve trafficability.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Periodically harvesting windthrown trees helps to improve the productivity of this sandy soil.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Grading or shaping land prior to construction helps to reduce damage from surface water and prevents soil erosion.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIs
Woodland ordination symbol: 9S, based on loblolly pine as the indicator species

BaB—Badin channery silt loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 500 acres

Composition

Badin and similar soils: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—yellowish brown channery silt loam

Subsoil:
4 to 8 inches—reddish yellow silty clay loam that has pink mottles
8 to 16 inches—red silty clay that has red mottles
16 to 26 inches—yellowish red silty clay that has brownish yellow and red mottles
26 to 33 inches—yellowish red silty clay loam that has olive yellow and red mottles

Underlying material:
33 to 38 inches—mottled red, yellowish red, and light gray channery silt loam saprolite

Bedrock:
38 to 60 inches—weathered argillite

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and the outer edge of map units
• Random areas of eroded Badin soils that have a surface layer of channery silty clay loam

Similar inclusions:
• Random areas of Badin soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Soil fertility and erodibility
Management measures and considerations:
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Shrink-swell potential
Management concerns for dwellings with basements: Shrink-swell potential and depth to bedrock
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Special earthmoving equipment is needed because of the limited depth of the soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8D, based on loblolly pine as the indicator species

BaC—Badin channery silt loam, 8 to 15 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Oblong to long and narrow
Size of areas: 10 to 450 acres

Composition

Badin soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—yellowish brown channery silt loam

Subsoil:
4 to 8 inches—reddish yellow silty clay loam that has pink mottles
8 to 16 inches—red silty clay that has red mottles
16 to 26 inches—yellowish red silty clay that has brownish yellow and red mottles
26 to 33 inches—yellowish red silty clay loam that has olive yellow and red mottles

Underlying material:
33 to 38 inches—mottled red, yellowish red, and light gray channery silt loam saprolite

Bedrock:
38 to 60 inches—weathered argillite

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Hazard of flooding: None
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite

and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and on the upper side slopes
• Random areas of eroded Badin soils that have a surface layer of channery silty clay loam

Similar inclusions:
• Random areas of Badin soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Woodland and pasture
Other Uses: Cropland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Potential productivity for commercial species: Moderately high for loblolly pine
Management concerns: Windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.
• Extra care is needed in maintaining roads and fire lanes due to the windthrow potential.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Slope and shrink-swell potential
Management concerns for dwellings with basements: Depth to bedrock, slope, and shrink-swell potential
Management measures and considerations:
• Designing structures so that they conform to the natural slope helps to improve soil performance.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Special earthmoving equipment is needed because of the limited depth of the soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Accessing public sewage system outlets eliminates

the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8D, based on loblolly pine as the indicator species

BdB2—Badin silty clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the southern and northeastern parts of the county in the Carolina Slate Belt
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 500 acres

Composition

Badin and similar soils: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—yellowish red silty clay loam

Subsoil:
6 to 20 inches—red silty clay that has reddish yellow mottles
20 to 28 inches—red channery silty clay loam that has reddish yellow mottles

Bedrock:
28 to 42 inches—weathered argillite
42 inches—unweathered argillite

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and the outer edge of map units
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Badin soils that have a surface layer of silt loam, channery silt loam, channery loam, or channery fine sandy loam

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.

• Performing tillage only during periods when the soil is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, clover, and legumes
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Unsurfaced roads may be impassible during wet periods because of the high clay content of the soil.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Shrink-swell potential
Management concerns for dwellings with basements: Shrink-swell potential and depth to bedrock
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Special earthmoving equipment is needed because of the limited depth of the soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 6D, based on loblolly pine as the indicator species

BdC2—Badin silty clay loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the southern and northeastern parts of the county in the Carolina Slate Belt

Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 5 to 250 acres

Composition

Badin and similar soils: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—yellowish red silty clay loam

Subsoil:
6 to 20 inches—red silty clay that has reddish yellow mottles
20 to 28 inches—red channery silty clay loam that has reddish yellow mottles

Bedrock:
28 to 42 inches—weathered argillite
42 inches—unweathered argillite

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and the outer edge of map units
• Random areas of eroded Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Badin soils that have a surface layer of silt loam, channery silt loam, channery loam, or channery fine sandy loam

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.
• Performing tillage only during periods when the soil is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, clover, and legumes
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Shrink-swell potential and slope
Management concerns for dwellings with basements: Shrink-swell potential, depth to bedrock, and slope
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Special earthmoving equipment is needed because of the limited depth of the soil.
• Grading or shaping land prior to construction helps to reduce damage from surface water and prevents soil erosion.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 6D, based on loblolly pine as the indicator species

BgB—Badin-Goldston complex, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the western part of the county in the Carolina Slate Belt
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 350 acres

Composition

Badin soil and similar inclusions: 60 percent
Goldston soil and similar inclusions: 25 percent
Dissimilar inclusions: 15 percent

Typical Profile

Badin

Surface layer:
0 to 4 inches—yellowish brown channery silt loam

Subsoil:
4 to 8 inches—reddish yellow silty clay loam that has pink mottles
8 to 16 inches—red silty clay that has red mottles
16 to 26 inches—yellowish red silty clay that has brownish yellow and red mottles
26 to 33 inches—yellowish red silty clay loam that has olive yellow and red mottles

Underlying material:
33 to 38 inches—mottled red, yellowish red, and light gray channery silt loam saprolite

Bedrock:
38 to 60 inches—weathered argillite

Goldston

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered slate
23 inches—unweathered slate

Soil Properties and Qualities

Depth class: Badin—moderately deep; Goldston—shallow
Drainage class: Well drained
Permeability: Badin—moderate; Goldston—moderately rapid
Available water capacity: Badin—moderate; Goldston—very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Badin—moderate; Goldston—low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: Badin—20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock; Goldston—10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• The moderately well drained Misenheimer and Callison soils in depressional areas and along drainageways
• Random areas of soils that have soft bedrock at a depth of less than 10 inches
• Random areas of eroded Badin and Goldston soils that have a surface layer of channery silty clay loam or channery silty clay

Similar inclusions:
• Random areas of Badin and Goldston soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Cropland
Other Uses: Woodland and pasture

Agricultural Development

Cropland

Suitability: Badin—suited; Goldston—poorly suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Badin—erodibility and soil fertility; Goldston—erodibility, rooting depth, droughtiness, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and rotations with soil-conserving crops help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Because of the shallow rooting depth, areas of the Goldston soil are difficult to manage for economical crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Badin—well suited; Goldston—suited
Suitability for hayland: Badin—suited; Goldston—poorly suited
Commonly grown crops: Tall fescue, clover, and legumes
Management concerns: Badin—soil fertility; Goldston—droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Because of the shallow rooting depth, areas of the Goldston soil are difficult to manage for the economical production of pasture and hay crops.

• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Badin—well suited; Goldston—suited
Productivity class: Moderately high for loblolly pine
Management concerns: Badin—windthrow hazard; Goldston—seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Badin—suited; Goldston—poorly suited
Management concerns for dwellings without basements: Badin—shrink-swell potential; Goldston—depth to bedrock
Management concerns for dwellings with basements: Badin—depth to bedrock and shrink-swell potential; Goldston—depth to bedrock
Management measures and considerations:
• Special earthmoving equipment is needed for dwellings with basements because of the limited depth of the soils.
• Where possible, dwellings without basements should be constructed in areas of the Badin soil rather than in areas of the Goldston soil.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling of the Badin soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Accessing public sewage system outlets eliminates the need to use these severely limited soils for septic tank systems.

Local roads and streets

Suitability: Badin—poorly suited; Goldston—suited
Management concerns: Badin—low strength; Goldston—depth to bedrock
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Blasting, land shaping, and grading may be needed in areas of the Goldston soil.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: Badin—IIIe; Goldston—IVs
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Badin soil and 7D in areas of the Goldston soil

BgC—Badin-Goldston complex, 8 to 15 percent slopes

Setting

Landscape: Piedmont; mainly in the western part of the county in the Carolina Slate Belt
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 5 to 250 acres

Composition

Badin soil and similar inclusions: 60 percent
Goldston soil and similar inclusions: 25 percent
Dissimilar inclusions: 15 percent

Typical Profile

Badin

Surface layer:
0 to 4 inches—yellowish brown channery silt loam

Subsoil:
4 to 8 inches—reddish yellow silty clay loam that has pink mottles
8 to 16 inches—red silty clay that has red mottles
16 to 26 inches—yellowish red silty clay that has brownish yellow and red mottles
26 to 33 inches—yellowish red silty clay loam that has olive yellow and red mottles

Underlying material:
33 to 38 inches—mottled red, yellowish red, and light gray channery silt loam saprolite

Bedrock:
38 to 60 inches—weathered argillite

Goldston

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered slate
23 inches—unweathered slate

Soil Properties and Qualities

Depth class: Badin—moderately deep; Goldston—shallow
Drainage class: Well drained
Permeability: Badin—moderate; Goldston—moderately rapid
Available water capacity: Badin—moderate; Goldston—very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Badin—moderate; Goldston—low
Slope class: Strongly sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: Badin—20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock; Goldston—10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• The moderately well drained Misenheimer and Callison soils in depressional areas and along drainageways
• Random areas of soils that have soft bedrock at a depth of less than 10 inches
• Random areas of eroded Badin and Goldston soils that have a surface layer of channery silty clay loam or channery silty clay

Similar inclusions:
• Random areas of Badin and Goldston soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and cropland

Agricultural Development

Cropland

Suitability: Badin—suited; Goldston—poorly suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Badin—erodibility and soil fertility; Goldston—erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Because of the shallow rooting depth, areas of the Goldston soil are difficult to manage for economical crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Badin—well suited; Goldston—suited
Suitability for hayland: Badin—suited; Goldston—poorly suited

Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Badin—soil fertility; Goldston—droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the Goldston soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Badin—well suited; Goldston—suited
Potential productivity for commercial species: Moderately high for loblolly pine
Management concerns: Badin—windthrow hazard; Goldston—seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Badin—suited; Goldston—poorly suited
Management concerns for dwellings without basements: Badin—slope and shrink-swell potential; Goldston—slope and depth to bedrock
Management concerns for dwellings with basements: Badin—slope, shrink-swell potential, and depth to bedrock; Goldston—slope and depth to bedrock
Management measures and considerations:
• Special earthmoving equipment is needed for dwellings with basements because of the limited depth of the soils.
• Where possible, dwellings without basements should be constructed in areas of the Badin soil rather than in areas of the Goldston soil.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling of the Badin soil.
• Designing structures so that they conform to the natural slope helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use these severely limited soils for septic tank systems.

Local roads and streets

Suitability: Badin—poorly suited; Goldston—suited
Management concerns: Badin—low strength; Goldston—depth to bedrock and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Blasting, land shaping, and grading may be needed in areas of the Goldston soil.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: Badin—IVe; Goldston—IVs
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Badin soil and 7D in areas of the Goldston soil

BgD—Badin-Goldston complex, 15 to 25 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern and southern parts of the county in the Carolina Slate Belt
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes
Shape of areas: Long and narrow
Size of areas: 5 to 150 acres

Composition

Badin soil and similar inclusions: 60 percent
Goldston soil and similar inclusions: 25 percent
Dissimilar inclusions: 15 percent

Typical Profile

Badin

Surface layer:
0 to 4 inches—yellowish brown channery silt loam

Subsoil:
4 to 8 inches—reddish yellow silty clay loam that has pink mottles
8 to 16 inches—red silty clay that has red mottles
16 to 26 inches—yellowish red silty clay that has brownish yellow and red mottles
26 to 33 inches—yellowish red silty clay loam that has olive yellow and red mottles

Underlying material:
33 to 38 inches—mottled red, yellowish red, and light gray channery silt loam saprolite

Bedrock:
38 to 60 inches—weathered argillite

Goldston

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered slate
23 inches—unweathered slate

Soil Properties and Qualities

Depth class: Badin—moderately deep; Goldston—shallow
Drainage class: Well drained
Permeability: Badin—moderate; Goldston—moderately rapid
Available water capacity: Badin—moderate; Goldston—very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Badin—moderate; Goldston—low
Slope class: Moderately steep
Surface runoff: Very rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: Badin—20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock; Goldston—10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of soils that have soft bedrock at a depth of less than 10 inches
• Random areas of eroded Badin and Goldston soils that have a surface layer of channery silty clay loam or channery silty clay

Similar inclusions:
• Random areas of Badin and Goldston soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Badin—erodibility, equipment use, and soil fertility; Goldston—erodibility, equipment use, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• This map unit is difficult to manage for cultivated crops because the slope limits equipment use.
• Resource management systems that include conservation tillage, crop residue management,

stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Because of the shallow rooting depth, areas of the Goldston soil are difficult to manage for economical crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Badin—suited; Goldston—poorly suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Badin—soil fertility, equipment use, and erodibility; Goldston—droughtiness, equipment use, rooting depth, erodibility, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope limits equipment use in the steeper areas.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the Goldston soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Potential productivity for commercial species: Moderately high for loblolly pine
Management concerns: Badin—erodibility, equipment use, and windthrow hazard; Goldston—erodibility, equipment use, windthrow hazard, and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns for dwellings without basements: Slope
Management concerns for dwellings with basements: Badin—slope; Goldston—slope and depth to bedrock
Management measures and considerations:
• Special earthmoving equipment is needed for dwellings with basements because of the limited depth of the soils.
• Where possible, dwellings without basements should be built in areas of the Badin soil rather than in areas of the Goldston soil.
• Designing structures so that they conform to the natural slope helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The depth to bedrock and slope are severe limitations affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use these severely limited soils for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Badin—low strength and slope; Goldston—depth to bedrock and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Blasting, land shaping, and grading may be needed in areas of the Goldston soil.
• Designing roads on the contour and providing

adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: Badin—VIe; Goldston—VIIs
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8R in areas of the Badin soil and 7D in areas of the Goldston soil

CaB—Candor sand, 1 to 8 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 250 acres

Composition

Candor soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
7 to 27 inches—light yellowish brown sand

Subsoil:
27 to 39 inches—yellowish brown loamy sand
39 to 50 inches—brownish yellow sand
50 to 58 inches—yellow sand that has strong brown mottles
58 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid in the upper part of the subsoil and moderately slow in the lower part
Available water capacity: Low
Depth to seasonal high water table: At a depth of 4.0 to 6.0 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Slow
Hazard of water erosion: Moderate
Parent material: Sandy marine sediments
Depth to bedrock: More than 80 inches

Minor Components

Dissimilar inclusions:
• The well drained Fuquay soils that have a loamy subsoil and more than 5 percent plinthite in the subsoil; in the less sloping positions
• Random areas of Ailey soils that have a loamy subsoil
• Random areas of the well drained Emporia soils that have a loamy subsoil and have a seasonal water table at a depth of 3.0 to 4.0 feet
• Random areas of the moderately well drained Pelion soils that have a loamy subsoil

Similar inclusions:
• Random areas of soils that are similar to the Candor soil but have sandy surface layers more than 40 inches thick
• Random areas of Candor soils that have a surface layer of loamy sand
• Wakulla soils that do not have loamy horizons between depths of 40 and 80 inches; in the slightly higher positions

Land Use

Dominant Uses: Pasture and hayland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Soybeans, small grain, and cotton
Management concerns: Soil blowing, droughtiness, and nutrient leaching
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Using split applications of fertilizer and herbicides helps to increase their effectiveness.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Using equipment with low-pressure tires helps to

minimize slippage and rutting caused by the high sand content of the soil.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Bermudagrass, orchardgrass, and legumes
Management concerns: Soil blowing, equipment use, droughtiness, nutrient leaching, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Using split applications of fertilizer and herbicides helps to increase their effectiveness.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.

Woodland

Suitability: Well suited
Productivity class: Moderate for longleaf pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Using tracked or low-pressure ground equipment helps to minimize rutting and root compaction during harvesting.
• Planting high-quality seedlings in a shallow furrow helps to increase plant survival rates.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.

Urban Development

Dwellings

Suitability for dwellings without basements: Well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements:
• There are no significant limitations affecting dwellings without basements.
Management concerns for dwellings with basements: Wetness
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.
• Installing a subsurface drainage system helps to lower the perched water table.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Poor filtering capacity
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Measures that improve the filtering capacity should be considered; the soil readily absorbs but does not adequately filter effluent.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 4S, based on longleaf pine as the indicator species

CaC—Candor sand, 8 to 15 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 10 to 250 acres

Composition

Candor soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
7 to 27 inches—light yellowish brown sand

Subsoil:
27 to 39 inches—yellowish brown loamy sand
39 to 50 inches—brownish yellow sand
50 to 58 inches—yellow sand that has strong brown mottles
58 to 75 inches—strong brown sandy loam that has brownish yellow mottles
75 to 80 inches—strong brown sandy clay loam that has light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid in the upper part of the subsoil and moderately slow in the lower part
Available water capacity: Low
Depth to seasonal high water table: At a depth of 4.0 to 6.0 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Sandy marine sediments
Depth to bedrock: More than 80 inches

Minor Components

Dissimilar inclusions:
• The well drained Ailey and Fuquay soils that have a loamy subsoil; in the less sloping positions
• The well drained Emporia soils that have a loamy subsoil and have a seasonal water table at a depth of 3.0 to 4.0 feet; on the less sloping parts of the landscape
• Random areas of soils that are similar to the Candor soil but have a seasonal water table at a depth of 4.0 to 6.0 feet; in the slightly lower-lying positions

Similar inclusions:
• Random areas of soils that are similar to the Candor soil but have sand surface layers more than 40 inches thick
• Random areas of Candor soils that have a surface layer of loamy sand
• Wakulla soils that do not have loamy horizons between depths of 40 and 80 inches; in the less sloping landform positions

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Soybeans and small grain
Management concerns: Soil blowing, droughtiness, and nutrient leaching
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Using split applications of fertilizer and herbicides helps to increase their effectiveness.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Bermudagrass, orchardgrass, and legumes
Management concerns: Soil blowing, equipment use, droughtiness, nutrient leaching, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Using split applications of fertilizer and herbicides helps to increase their effectiveness.

Woodland

Suitability: Well suited
Productivity class: Moderate for longleaf pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Using tracked or low-pressure ground equipment helps to minimize rutting and root compaction during harvesting.

• Planting high-quality seedlings in a shallow furrow helps to increase plant survival rates.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Slope
Management concerns for dwellings with basements: Slope and wetness
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Grading or shaping land prior to construction helps to reduce damage from surface water and prevents soil erosion.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Poor filtering capacity
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Measures that improve the filtering capacity should be considered; the soil readily absorbs but does not adequately filter effluent.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 4S, based on longleaf pine as the indicator species

CeB2—Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the eastern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Rounded or irregular
Size of areas: 5 to 50 acres

Composition

Cecil soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsoil:
6 to 30 inches—red clay
30 to 36 inches—red clay that has reddish yellow mottles
36 to 48 inches—red clay loam

Underlying material:
48 to 62 inches—light red loam saprolite that has reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium or rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from felsic high-grade metamorphic or igneous rock
Depth to bedrock: 60 to more than 72 inches

Minor Components

Dissimilar inclusions:
• Random areas of Pacolet soils that have saprolite at a depth of less than 40 inches
• Random areas of noneroded Cecil soils that have a surface layer of sandy loam, fine sandy loam, or loam

Similar inclusions:
• Random areas of Hiwassee soils that have a surface layer of dark red clay loam and are dark red in the upper part of the subsoil

Land Use

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

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to prevent further erosion by stabilizing the soil, controlling surface runoff, and maximizing the infiltration of water.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.
• Performing tillage only during periods when the soil is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, clover, and legumes
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Potential productivity for commercial species: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Unsurfaced roads may be impassible during wet periods because of the high clay content of the soil.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 7C, based on loblolly pine as the indicator species

CeC2—Cecil sandy clay loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the eastern part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Rounded or irregular
Size of areas: 5 to 50 acres

Composition

Cecil soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsoil:
6 to 30 inches—red clay
30 to 36 inches—red clay that has reddish yellow mottles
36 to 48 inches—red clay loam

Underlying material:
48 to 62 inches—light red loam saprolite that has reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from felsic high-grade metamorphic or igneous rock
Depth to bedrock: 60 to more than 72 inches

Minor Components

Dissimilar inclusions:
• Random areas of Pacolet soils that have saprolite at a depth of less than 40 inches
• Random areas of noneroded Cecil soils that have a surface layer of sandy loam, fine sandy loam, or loam

Similar inclusions:
• Random areas of Hiwassee soils that have a surface layer of dark red clay loam and are dark red in the upper part of the subsoil

Land Use

Dominant Uses: Woodland and pasture
Other Uses: Cropland and urban development

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
• Special care should be taken to prevent further soil erosion; resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to stabilize the soil, control surface runoff, and maximize the infiltration of rainfall.
• Performing tillage only during periods when the soil is not wet and incorporating crop residue into the soil or leaving residue on the soil surface help to minimize clodding and crusting and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, clover, and legumes
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.

• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Potential productivity for commercial species: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Unsurfaced roads may be impassible during wet periods because of the high clay content of the soil.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 7C, based on loblolly pine as the indicator species

ChA—Chewacla loam, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Shape of areas: Long and narrow or oblong
Size of areas: 5 to 2,000 acres

Composition

Chewacla soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 14 inches—brown silty clay loam
14 to 22 inches—dark yellowish brown sandy clay loam that has dark gray mottles
22 to 50 inches—light brownish gray clay loam that has brownish yellow and brown mottles

Underlying material:
50 to 60 inches—light brownish gray loamy fine sand that has yellowish red and brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Available water capacity: Moderate or high
Seasonal high water table: At a depth of 0.5 foot to 1.5 feet from November through April
Hazard of flooding: Frequent for brief to long periods from November through April
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Rock fragments on the surface: None
Parent material: Recent alluvial sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained Riverview and Shellbluff soils in the slightly higher positions, commonly closest to the stream channel
• Hornsboro soils that have a clayey subsoil; in the slightly higher positions at the base of upland slopes on a low terrace
• Poorly drained soils in low-lying depressional areas at the foot of upland slopes

Similar inclusions:
• Random areas of Chewacla soils that have a surface layer of silt loam, fine sandy loam, or sandy loam

Land Use

Dominant Uses: Woodland and pasture
Other Uses: Cropland

This map unit may contain wetlands. The local office of the Natural Resources Conservation Service should be contacted for guidance.

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, small grain, and soybeans
Management concerns: Flooding and wetness
Management measures and considerations:
• This map unit is difficult to manage for cropland because of the potential for flooding and wetness during the growing season.
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Installing a drainage system that includes open ditches, perforated tile, or land shaping helps to increase soil productivity.
• Performing tillage and harvesting when the soil is not wet helps to prevent clodding and rutting by equipment.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Flooding and wetness
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Installing a subsurface drainage system helps to improve the productivity of moisture-sensitive crops.

Woodland

Suitability: Suited
Potential productivity for commercial species: Moderately high for yellow-poplar
Management concerns: Equipment use and windthrow hazard
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occurs when the soil is saturated.
• Harvesting timber during summer helps to reduce the risk of damage from flooding.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Unsuited
Management concerns:
• The flooding and wetness are severe limitations affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The flooding and wetness are severe limitations

affecting septic tank absorption fields. A site should be selected on better suited soils.

Management measures and considerations:

• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength, flooding, and wetness
Management measures and considerations:

• Bridges should be constructed or culverts used to cross streams and flood plains.

• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.

Interpretive Groups

Land capability classification: IVw
Woodland ordination symbol: 7W, based on yellow-poplar as the indicator species

CmA—Chewacla and Chastain soils, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Shape of areas: Oblong or irregular
Size of areas: 50 to 800 acres

Composition

Chewacla soil and similar inclusions: 60 percent
Chastain soil and similar inclusions: 20 percent
Dissimilar inclusions: 20 percent

Typical Profile

Chewacla

Surface layer:
0 to 6 inches—brown loam

Subsoil:
6 to 14 inches—brown silty clay loam
14 to 22 inches—dark yellowish brown sandy clay loam that has dark gray mottles
22 to 50 inches—light brownish gray clay loam that has brownish yellow and brown mottles

Underlying material:
50 to 60 inches—light brownish gray loamy fine sand that has yellowish red and brown mottles

Chastain

Surface layer:
0 to 6 inches—brown loam that has brownish yellow and light brownish gray mottles

Subsoil:
6 to 16 inches—light gray silty clay loam that has brownish yellow mottles
16 to 28 inches—light gray clay that has yellowish brown mottles
28 to 47 inches—light gray clay that has yellowish brown mottles
47 to 60 inches—light brownish gray clay that has yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Chewacla—somewhat poorly drained; Chastain—poorly drained
Permeability: Chewacla—moderate; Chastain—slow
Available water capacity: Moderate or high
Seasonal high water table: Chewacla—at a depth of 0.5 foot to 1.5 feet from November through April; Chastain—within a depth of 1.0 foot from November through May
Hazard of flooding: Frequent from November through June for periods of 7 to 30 days
Shrink-swell potential: Chewacla—low; Chastain—moderate
Slope class: Nearly level
Surface runoff: Ponded or very slow
Hazard of water erosion: None or slight
Parent material: Alluvium derived mainly from mixed rock
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:

• The well drained Riverview and Shellbluff soils in the slightly higher positions, commonly closest to the stream channel

• Random areas of moderately well drained soils

• Random areas of the somewhat poorly drained Hornsboro soils

Similar inclusions:

• Random areas of Chewacla and Chastain soils that have a surface layer of fine sandy loam

Land Use

Dominant Uses: Woodland and pasture
Other Uses: Cropland

This map unit may contain wetlands. The local office of the Natural Resources Conservation Service should be contacted for guidance.

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, small grain, and soybeans
Management concerns: Flooding and wetness
Management measures and considerations:
• This map unit is difficult to manage for cropland because of the potential for flooding and wetness during the growing season.
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Performing tillage and harvesting when the soils are not wet helps to prevent clodding and rutting by equipment.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Planting wetness-tolerant species in undrained areas helps to improve soil productivity.

Pasture and hayland

Suitability: Poorly suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Wetness and flooding
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soils are too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Installing a subsurface drainage system helps to improve the productivity of moisture-sensitive crops.

Woodland

Suitability: Chewacla—suited; Chastain—poorly suited
Productivity class: Chewacla—moderately high for loblolly pine; Chastain—moderately high for sweetgum
Management concerns: Equipment use and windthrow hazard
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Harvesting timber during summer helps to reduce the risk of damage from flooding.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occur when the soils are saturated.

Urban Development

Dwellings

Suitability: Unsuited
Management concerns:
• The flooding and wetness are severe limitations affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The flooding and wetness are severe limitations affecting septic tank absorption fields. A site should be selected on better suited soils.
Management measures and considerations:
• The Anson County Health Department should be contacted for additional guidance.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength, flooding, and wetness
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Bridges should be constructed or culverts used to cross wet areas and drainageways.
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.

Interpretive Groups

Land capability classification: Chewacla—IVw; Chastain—VIIw
Woodland ordination symbol: Chewacla—7W, based on yellow-poplar as the indicator species; Chastain—9W, based on sweetgum as the indicator species

CnA—Claycreek fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad upland flats
Landform position: Concave interfluves
Shape of areas: Irregular
Size of areas: 5 to 500 acres

Composition

Claycreek soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsoil:
8 to 17 inches—yellow silt loam that has brownish yellow mottles
17 to 32 inches—brownish yellow silt loam that has gray mottles
32 to 47 inches—yellowish brown clay loam that has light gray mottles
47 to 54 inches—light gray clay loam that has yellowish brown mottles

Underlying material:
54 to 75 inches—light gray sandy clay loam saprolite that has yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately slow
Available water capacity: High
Seasonal high water table: At a depth of 1.5 to 3.0 feet from January through March
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: None or slight
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- The well drained Mayodan soils in the slightly higher positions
- Pinoka soils that have soft bedrock at a depth of less than 20 to 40 inches; on small knolls
- Random areas of Creedmoor soils that have a clayey subsoil
- White Store soils that have a clayey subsoil; in the slightly higher positions
- Polkton soils that have a clayey subsoil and have soft bedrock at a depth of 20 to 40 inches; in the slightly higher positions
- Iredell soils that have less acidity in the subsoil than the Claycreek soil; on small knolls

Similar inclusions:
- Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
- Random areas of well drained soils that have a firm subsoil
- Random areas of soils that have a clayey subsoil and are slowly permeable

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, tobacco, and cotton
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
- Installing a subsurface drainage system helps to improve the productivity of moisture-sensitive crops, such as tobacco.
- This soil retains soil-applied herbicides due to the high clay content; the concentration of herbicides may be damaging to future crops.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine

Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• Building structures on the highest part of the landscape and using artificial drainage help to reduce the risk of damage from wetness.
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 10W, based on loblolly pine as the indicator species

CrB—Creedmoor fine sandy loam, 2 to 8 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 500 acres

Composition

Creedmoor soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsoil:
8 to 18 inches—brownish yellow sandy clay loam that has very pale brown mottles
18 to 33 inches—yellowish brown clay that has light brownish gray mottles
33 to 42 inches—light gray clay that has yellowish brown and reddish brown mottles

Underlying material:
42 to 62 inches—dark reddish brown sandy clay loam saprolite that has light gray mottles

Bedrock:
62 to 65 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Available water capacity: High
Seasonal high water table: At a depth of 1.5 to 2.0 feet from January through March
Hazard of flooding: None
Shrink-swell potential: High
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained Mayodan soils on small knolls
• Claycreek soils that have a loamy subsoil; in the slightly lower-lying positions
• White Store soils that have a higher clay content in the upper part of the subsoil than the Creedmoor soil; in the slightly higher positions
• Iredell soils that have less acidity in the subsoil than the Creedmoor soil; on small elongated knolls
• Random areas of the well drained Granville soils that have a loamy subsoil
• Random areas of Polkton soils that have soft bedrock at a depth of 20 to 40 inches

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of well drained soils that have very slow permeability in the subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, tobacco, and cotton
Management concerns: Soil blowing, wetness, and soil fertility
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Soil blowing, wetness, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns for dwellings without basements: Shrink-swell potential
Management concerns for dwellings with basements: Shrink-swell potential and wetness
Management measures and considerations:
• Building structures on the highest part of the landscape and using artificial drainage help to reduce the risk of damage from wetness.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Constructing roads on well-compacted fill material helps to overcome the shrink-swell limitation.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

DAM—Dam

This map unit is made up of the Blewett Falls Dam. This concrete structure impounds water and forms the Blewett Falls Lake. It is a barrier that obstructs the flow of water from the Pee Dee River.

This map unit is not assigned a land capability class or a woodland ordination symbol.

DoA—Dothan loamy sand, 0 to 2 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Broad upland flats
Landform position: Planar interfluves
Shape of areas: Irregular
Size of areas: 10 to 300 acres

Composition

Dothan soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—brown loamy sand

Subsurface layer:
8 to 12 inches—light yellowish brown loamy sand

Subsoil:
12 to 28 inches—brownish yellow sandy clay loam
28 to 40 inches—brownish yellow sandy clay loam that has yellowish red mottles
40 to 50 inches—reticulately mottled brownish yellow, yellowish red, and light gray sandy clay loam
50 to 64 inches—reticulately mottled yellowish red, brownish yellow, and light gray sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: Moderate
Seasonal high water table: At a depth of 3.0 to 5.0 feet from January through April
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Fuquay soils that have sandy surface layers more than 20 inches thick; in landform positions similar to those of the Dothan soil
• Ailey soils that have less than 5 percent plinthite; on side slopes and along the edge of map units
• Lillington soils that have a gravelly surface layer and very gravelly subsoil; on small knolls
• The moderately well drained Pelion soils; in the slightly lower-lying positions
• Random areas of Emporia soils that have less than 5 percent plinthite
• Random areas of soils that are similar to the Dothan soil but have a high water table at a depth of less than 3 feet

Similar inclusions:
• Random areas of Dothan soils that have a sand surface layer

Land Use

Dominant Uses: Cropland and pasture (fig. 5)
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, tobacco, soybeans, cotton, and small grain
Management concerns: Equipment use and soil fertility
Management measures and considerations:
• Leaving the maximum amount of crop residue on the soil surface helps to conserve soil moisture.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Bermudagrass and fescue grass
Management concerns: Soil fertility

Figure 5.—Harvesting of cotton on Dothan loamy sand, 0 to 2 percent slopes, near McFarlan.

Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability for dwellings without basements: Well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements:
• There are no major limitations affecting dwellings without basements.
Management concerns for dwellings with basements: Wetness
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: I
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

EmB—Emporia loamy sand, 2 to 6 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 450 acres

Composition

Emporia soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—pale brown loamy sand

Subsurface layer:
7 to 14 inches—light yellowish brown loamy sand

Subsoil:
14 to 36 inches—yellowish brown sandy clay loam
36 to 48 inches—yellowish brown clay loam that has light gray and red mottles

Underlying material:
48 to 62 inches—yellowish brown, red, and light gray sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate or moderately slow in the upper part of the profile and moderately slow or slow in the lower part
Available water capacity: Moderately high
Seasonal high water table: At a depth of 3.0 to 4.5 feet from November through April
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Loamy and clayey marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Ailey soils that have sandy surface layers more than 20 inches thick; in landform positions similar to those of the Emporia soil
• Random areas of Fuquay soils that have a sandy surface layer more than 20 inches thick and have more than 5 percent plinthite in the subsoil; on the nearly level landscapes
• Dothan soils that have more than 5 percent plinthite in the subsoil; on the nearly level landscapes
• The moderately well drained Pelion soils in low-lying depressional areas
• Vaucluse soils that have a brittle layer in the subsoil; on the outer edge of map units
• Random areas of Lillington soils that have a gravelly surface layer and very gravelly subsoil

Similar inclusions:
• Random areas of Emporia soils that have a surface layer of sand or fine sandy loam

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, tobacco, cotton, and small grain
Management concerns: Erodibility, soil blowing, equipment use, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.

• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Erodibility, soil blowing, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.

Urban Development

Dwellings

Suitability for dwellings without basements: Well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements:
• There are no major limitations affecting dwellings without basements.
Management concerns for dwellings with basements: Shrink-swell potential and wetness
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9S, based on loblolly pine as the indicator species

EmC—Emporia loamy sand, 6 to 10 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 5 to 60 acres

Composition

Emporia soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—pale brown loamy sand

Subsurface layer:
7 to 14 inches—light yellowish brown loamy sand

Subsoil:
14 to 36 inches—yellowish brown sandy clay loam
36 to 48 inches—yellowish brown clay loam that has light gray and red mottles

Underlying material:
48 to 62 inches—yellowish brown, red, and light gray sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate or moderately slow in the upper part and moderately slow or slow in the lower part
Available water capacity: Moderately high
Seasonal high water table: At a depth of 3.0 to 4.5 feet from November through April
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Moderately sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Loamy and clayey marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Vaucluse soils that have a brittle layer in the subsoil; on the outer edge of map units
• Random areas of Lillington soils that have a gravelly surface layer and very gravelly subsoil
• Random areas of Ailey soils that have sandy surface layers more than 20 inches thick; in landform positions similar to those of the Emporia soil
• The moderately well drained Pelion soils on the lower side slopes

Similar inclusions:
• Random areas of Emporia soils that have a surface layer of sand or fine sandy loam
• Random areas of soils that have moderate permeability

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, tobacco, cotton, and small grain
Management concerns: Erodibility, soil blowing, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Erodibility, soil blowing, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival

Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Using site preparation practices, such as chopping, prescribed burning, and herbicide application, helps to reduce competition from unwanted plants.

Urban Development

Dwellings

Suitability for dwellings without basements: Well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements: Slope
Management concerns for dwellings with basements: Wetness, slope, and shrink-swell potential
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 9S, based on loblolly pine as the indicator species

FuA—Fuquay loamy sand, 0 to 3 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Broad upland flats
Landform position: Planar interfluves
Shape of areas: Irregular
Size of areas: 50 to 400 acres

Composition

Fuquay soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
7 to 24 inches—light yellowish brown loamy sand

Subsoil:
24 to 28 inches—brownish yellow sandy loam
28 to 40 inches—brownish yellow sandy clay loam that has yellowish brown mottles
40 to 48 inches—reticulately mottled light yellowish brown, strong brown, and yellowish red sandy clay loam
48 to 65 inches—reticulately mottled yellowish red, strong brown, and light gray sandy clay loam

Underlying material:
65 to 75 inches—reticulately mottled red, brownish yellow, and light gray sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part of the subsoil and slow in the lower part
Available water capacity: Low
Seasonal high water table: At a depth of 4.0 to 6.0 feet from January through March
Hazard of flooding: None
Shrink-swell potential: Low

Slope class: Nearly level or gently sloping
Surface runoff: Medium
Hazard of water erosion: None or slight
Parent material: Sandy and loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Dothan soils that have sandy surface layers less than 20 inches thick; in the steeper areas
• Ailey soils that have less than 5 percent plinthite in the subsoil; on the steeper slopes and along the edge of map units
• Candor and Wakulla soils that have a sandy subsoil; on small knolls
• Lillington soils that have a gravelly surface layer and very gravelly subsoil; on small knolls
• Random areas of Emporia soils that have less than 5 percent plinthite
• Random areas of soils that are similar to the Fuquay soil but have a high water table at a depth of less than 4 feet
• Random areas of soils that have sandy surface layers more than 40 inches thick

Similar inclusions:
• Random areas of Fuquay soils that have a sand surface layer

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Soil blowing, equipment use, droughtiness, and soil fertility
Management measures and considerations:
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Using equipment with low-pressure tires helps to minimize slippage and rutting caused by the high sand content of the soil.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Bermudagrass and fescue grass
Management concerns: Soil blowing, droughtiness, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Using wide-tire or crawler-type equipment and harvesting trees in the drier summer months help to improve trafficability.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Prescribed burning helps to reduce competition from hardwood species.

Urban Development

Dwellings

Suitability for dwellings without basements: Well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements:
• There are no major limitations affecting dwellings without basements.
Management concerns for dwellings with basements: Wetness
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Vegetating cleared and graded areas as soon as

possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and poor filtering capacity
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIs
Woodland ordination symbol: 8S, based on loblolly pine as the indicator species

GeB2—Georgeville silty clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the southern part of the county in the Carolina Slate Belt
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 250 acres

Composition

Georgeville soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—yellowish red silty clay loam

Subsoil:
4 to 20 inches—red clay
20 to 36 inches—red clay that has reddish brown mottles
36 to 42 inches—red silty clay loam that has reddish brown mottles

Underlying material:
42 to 68 inches—reddish brown loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from schist and other fine-grained metamorphic rocks
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Random areas of Tarrus or Nanford soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of Pacolet soils that have saprolite at a depth of less than 40 inches
• Random areas of noneroded Georgeville soils that have a surface layer of silt loam or loam

Similar inclusions:
• Random areas of Cecil soils that have less silt in the subsoil than the Georgeville soil
• Random areas of Georgeville soils that have a surface layer of clay loam

Land Use

Dominant Uses: Cropland, pasture, and hayland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to prevent

further erosion by stabilizing the soil, controlling surface runoff, and maximizing the infiltration of water.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.
• Performing tillage only during periods when the soil is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8C, based on loblolly pine as the indicator species

GoB—Goldston channery silt loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Ridges
Landform position: Convex interfluves
Shape of areas: Oblong or long and narrow
Size of areas: 10 to 120 acres

Composition

Goldston soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered, highly fractured slate
23 inches—unweathered, slightly fractured slate

Soil Properties and Qualities

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Random areas of soils that have hard bedrock at a depth of less than 20 inches
• The moderately well drained Misenheimer soils in the slightly lower-lying positions
• The moderately well drained Callison soils that have soft bedrock at a depth of 20 to 40 inches; in the slightly lower-lying positions

Similar inclusions:
• Random areas of Goldston soils that have a surface layer of channery loam or channery fine sandy loam

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• This soil is difficult to manage for economical crop production because of the shallow rooting depth.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• This soil is difficult to manage for the economical production of pasture and hay crops because of the shallow rooting depth.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The depth to bedrock is a severe limitation affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Depth to bedrock
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 7D, based on loblolly pine as the indicator species

GoC—Goldston channery silt loam, 8 to 15 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Oblong or long and narrow
Size of areas: 10 to 250 acres

Composition

Goldston soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered, highly fractured slate
23 inches—unweathered, slightly fractured slate

Soil Properties and Qualities

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Medium or rapid
Hazard of water erosion: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Random areas of soils that have hard bedrock at a depth of less than 20 inches
• The moderately well drained Misenheimer soils on footslopes
• The moderately well drained Callison soils that have soft bedrock at a depth of 20 to 40 inches; on footslopes

Similar inclusions:
• Random areas of Goldston soils that have a surface layer of channery loam or channery fine sandy loam
• Random areas of soils that have a surface layer of loam, silt loam, or fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Slope, erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• This soil is difficult to manage for economical crop production because of the shallow rooting depth.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Slope, droughtiness, erodibility, rooting depth, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• This map unit is difficult to manage for the economical production of pasture and hay crops because of the shallow rooting depth.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The depth to bedrock and slope are severe limitations affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 7D, based on loblolly pine as the indicator species

GoD—Goldston channery silt loam, 15 to 25 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Hillslopes and narrow ridges
Landform position: Convex side slopes
Shape of areas: Oblong or long and narrow
Size of areas: 10 to 250 acres

Composition

Goldston soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered, highly fractured slate
23 inches—unweathered, slightly fractured slate

Soil Properties and Qualities

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Moderately steep
Surface runoff: Rapid
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Random areas of soils that have hard bedrock at a depth of less than 20 inches
• Random areas of soils that have soft bedrock at a depth of less than 10 inches

Similar inclusions:
• Random areas of Goldston soils that have a surface layer of channery loam or channery fine sandy loam
• Random areas of soils that have a surface layer of loam, silt loam, or fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Unsuited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, droughtiness, rooting depth, and equipment use
Management measures and considerations:
• This map unit has severe limitations affecting crop production. A site should be selected on better suited soils.

Pasture and hayland

Suitability for pasture: Poorly suited
Suitability for hayland: Unsuited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Erodibility, equipment use, and rooting depth
Management measures and considerations:
• The slope is a severe limitation affecting crop production. A site should be selected on better suited soils.
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope limits equipment use in the steeper areas.
• Selecting drought-tolerant species helps to increase productivity.
• This map unit is difficult to manage for the economical production of pasture and hay crops because of the shallow rooting depth.
• Applying lime and fertilizer according to recommendations based on soil tests helps to

increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The depth to bedrock and slope are severe limitations affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIIs
Woodland ordination symbol: 7D, based on loblolly pine as the indicator species

GoE—Goldston channery silt loam, 25 to 45 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county in the Carolina Slate Belt
Landform: Hillslopes and narrow ridges
Landform position: Side slopes and nose slopes
Shape of areas: Oblong or long and narrow
Size of areas: 10 to 250 acres

Composition

Goldston soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
5 to 9 inches—pale brown channery silt loam

Subsoil:
9 to 15 inches—yellowish brown very channery silt loam

Bedrock:
15 to 23 inches—weathered, highly fractured slate
23 inches—unweathered, slightly fractured slate

Soil Properties and Qualities

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Very low

Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Steep
Surface runoff: Very rapid
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to 40 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Badin soils that have soft bedrock at a depth of 20 to 40 inches; in the less sloping areas
• Random areas of soils that have hard bedrock at a depth of less than 20 inches
• Random areas of soils that have soft bedrock at a depth of less than 10 inches

Similar inclusions:
• Random areas of Goldston soils that have a surface layer of channery loam or channery fine sandy loam
• Random areas of soils that have a surface layer of loam, silt loam, or fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Unsuited
Commonly grown crops: None
Management concerns: Erodibility, equipment use, droughtiness, and rooting depth
Management measures and considerations:
• The slope is a severe limitation affecting crop production. A site should be selected on better suited soils.

Pasture and hayland

Suitability: Unsuited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Erodibility, equipment use, droughtiness, and rooting depth
Management measures and considerations:
• The slope is a severe limitation affecting the production of pasture and hay crops. A site should be selected on better suited soils.

Woodland

Suitability: Poorly suited
Productivity class: Low for loblolly pine
Management concerns: Erodibility, equipment use, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• This map unit has severe limitations affecting urban development. A site should be selected on better suited soils.
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The depth to bedrock and slope are severe limitations affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIIIs
Woodland ordination symbol: 7R, based on loblolly pine as the indicator species

GrB—Granville sandy loam, 2 to 8 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 300 acres

Composition

Granville soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
8 to 11 inches—brownish yellow sandy loam

Subsoil:
11 to 19 inches—yellowish brown sandy clay loam that has yellowish red and strong brown mottles
19 to 31 inches—yellowish brown clay loam that has red mottles
31 to 48 inches—yellowish brown clay loam that has red and light yellowish brown mottles
48 to 53 inches—mottled yellowish brown, red, very pale brown, light gray, and strong brown clay loam

Underlying material:
53 to 64 inches—mottled red, strong brown, pinkish white, and brownish yellow gravelly clay loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from sandstone, mudstone, or siltstone of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• The moderately well drained Iredell soils that have very slow permeability in the subsoil; on small elongated knolls
• Pinoka soils that have soft bedrock at a depth of 20 to 40 inches and hard bedrock at a depth of 40 to more than 60 inches; on shoulder slopes
• The moderately well drained Claycreek soils in low-lying depressional areas
• Random areas of soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of Mayodan soils that have a clayey subsoil
• Random areas of soils that have a clayey subsoil and are slowly permeable

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Granville soil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8A, based on loblolly pine as the indicator species

HeB2—Hiwassee clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly along the Pee Dee River
Landform: High stream terraces
Landform position: Convex ridges
Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

Hiwassee soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark red clay loam

Subsoil:
4 to 38 inches—dark reddish brown clay
38 to 44 inches—dark reddish brown clay that has reddish yellow mottles
44 to 58 inches—dark red clay loam that has reddish yellow mottles and very dark gray concretions
58 to 65 inches—red clay loam that has reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium or rapid
Hazard of water erosion: Severe
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• McQueen soils that have slow permeability; in the lower-lying terrace positions
• Tarrus soils that have soft bedrock at a depth of 40 to 60 inches; on the outer edge of map units
• Wynott soils that have slow permeability and have soft bedrock at a depth of 20 to 40 inches; in the lower areas
• State soils that have a loamy subsoil; in the lower-lying terrace positions

Similar inclusions:
• Random areas of Cecil soils that have a solum less than 60 inches thick
• Random areas of Pacolet soils that have a solum less than 40 inches thick
• Random areas of noneroded Hiwassee soils that have a loam surface layer

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, equipment use, soil fertility, and tilth
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to prevent further erosion by stabilizing the soil, controlling surface runoff, and maximizing the infiltration of water.
• Restricting fieldwork to periods when the soil is not wet helps to prevent rutting and compaction of the soil surface caused by the high clay content.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• This map unit has few limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited

Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 10C, based on loblolly pine as the indicator species

HeC2—Hiwassee clay loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands; mainly along the Pee Dee River
Landform: Hillslopes of high stream terraces
Landform position: Convex side slopes and nose slopes
Shape of areas: Oblong or irregular
Size of areas: 5 to 80 acres

Composition

Hiwassee soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark red clay loam

Subsoil:
4 to 38 inches—dark reddish brown clay
38 to 44 inches—dark reddish brown clay that has reddish yellow mottles
44 to 58 inches—dark red clay loam that has reddish yellow mottles and very dark gray concretions
58 to 65 inches—red clay loam that has reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Very severe
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• McQueen soils that have slow permeability; in the lower areas
• Tarrus soils that have soft bedrock at a depth of 40 to 60 inches; on the outer edge of map units and on the upper side slopes
• Wynott soils that have slow permeability and have soft bedrock at a depth of 20 to 40 inches; on the lower side slopes

Similar inclusions:
• Random areas of Cecil soils that have a solum less than 60 inches thick
• Random areas of Pacolet soils that have a solum less than 40 inches thick
• Random areas of noneroded Hiwassee soils that have a loam surface layer

Land Use

Dominant Uses: Pasture and cropland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, equipment use, soil fertility, and tilth
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Performing tillage only during periods when the soil is not wet and incorporating crop residue into the soil or leaving residue on the soil surface help to minimize clodding and crusting and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited

Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines on the contour helps to improve the performance of septic tank absorption fields.
• Installing distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 10C, based on loblolly pine as the indicator species

HeD2—Hiwassee clay loam, 15 to 30 percent slopes, moderately eroded

Setting

Landscape: Piedmont uplands; mainly along the Pee Dee River
Landform: Hillslopes of high stream terraces
Landform position: Convex side slopes and nose slopes
Shape of areas: Long and narrow
Size of areas: 15 to 30 acres

Composition

Hiwassee soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—dark red clay loam

Subsoil:
4 to 38 inches—dark reddish brown clay
38 to 44 inches—dark reddish brown clay that has reddish yellow mottles
44 to 58 inches—dark red clay loam that has very dark gray and reddish yellow mottles
58 to 65 inches—red clay loam that has reddish yellow mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Moderately steep
Surface runoff: Very rapid
Hazard of water erosion: Very severe
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Tarrus soils that have soft bedrock at a depth of 40 to 60 inches; on the outer edge of map units and on the upper side slopes
• Wynott soils that have slow permeability and have soft bedrock at a depth of 20 to 40 inches; on the less sloping side slopes

Similar inclusions:
• Random areas of Cecil soils that have a solum less than 60 inches thick
• Random areas of Pacolet soils that have a solum less than 40 inches thick
• Random areas of noneroded Hiwassee soils that have a loam surface layer

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, equipment use, soil fertility, and tilth
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Performing tillage only during periods when the soil is not wet and incorporating crop residue into the soil or leaving residue on the soil surface help to minimize clodding and crusting and maximize the infiltration of water.
• This map unit is difficult to manage for cultivated crops because the slope limits equipment use.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• The slope limits equipment use in the steeper areas.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Slope

Management measures and considerations:
- Designing structures so that they conform to the natural slope helps to improve soil performance.
- Vegetating cleared and graded areas as soon aspossible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
- The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
- Installing septic system distribution lines on the contour helps to improve the performance of septic tank absorption fields.
- Installing distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
- Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 10R, based on loblolly pine as the indicator species

HoA—Hornsboro silt loam, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Piedmont; mainly along streams in the central part of the county
Landform: Low stream terraces
Landform position: Planar to slightly concave slopes
Shape of areas: Elongated
Size of areas: 10 to 200 acres

Composition

Hornsboro soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown silt loam
Subsurface layer:
6 to 10 inches—yellowish brown loam

Subsoil:
10 to 24 inches—light yellowish brown clay that has yellowish brown mottles
24 to 37 inches—mottled yellowish brown and gray clay
37 to 52 inches—yellowish brown clay that has gray and brownish yellow mottles
52 to 62 inches—gray clay that has yellowish brown mottles
62 to 70 inches—mottled gray and yellowish brown sandy clay loam

Underlying material:
70 to 80 inches—mottled light gray, yellowish brown, and brown fine sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Available water capacity: High or very high
Seasonal high water table: At a depth of 1.0 to 1.5 feet from November through May
Hazard of flooding: Rare
Shrink-swell potential: High
Slope class: Nearly level
Surface runoff: Very slow
Hazard of water erosion: None or slight
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- The moderately well drained Tetotum soils in the slightly higher positions
- The poorly drained Roanoke soils in the slightly lower-lying positions
- The poorly drained Chastain soils in the slightly lower-lying areas near flood plains
- Chewacla soils that have a loamy subsoil; in the slightly lower-lying areas near flood plains
- Random areas of soils that have less clay in the subsoil than the Hornsboro soil

Similar inclusions:
- Random areas of Hornsboro soils that have a surface layer of sandy loam
- Random areas of soils that have more acidity in the subsoil than the Hornsboro soil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland and pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Ponding, wetness, and high sodium content
Management measures and considerations:
• Using land shaping or grading in the construction of outlets for surface water helps to eliminate ponding.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Installing a drainage system that includes open ditches, perforated tile, or land shaping helps to improve soil productivity.
• The high sodium content may restrict rooting depth and plant growth during periods when the high water table is within the rooting depth.

Pasture and hayland

Suitability: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Ponding, wetness, and high sodium content
Management measures and considerations:
• Using land shaping or grading in the construction of outlets for surface water helps to eliminate ponding.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Installing a subsurface drainage system helps to improve the productivity of moisture-sensitive crops, such as alfalfa.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• The high sodium content may restrict rooting depth and plant growth during periods when the high water table is within the rooting depth.

Woodland

Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations during periods when the soil is not saturated helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.
• Using low-pressure ground equipment helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.

Urban Development

Dwellings

Suitability: Unsuited
Management concerns:
• The flooding, wetness, and shrink-swell potential are severe limitations affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for additional guidance.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.
• Using well-compacted fill material as a road base can help to elevate roads above the level of flooding.

Interpretive Groups

Land capability classification: IIIw in drained areas; IVw in undrained areas
Woodland ordination symbol: 9W, based on loblolly pine as the indicator species

IrB—Iredell fine sandy loam, 1 to 6 percent slopes

Setting

Landscape: Piedmont; mainly in the central part of the county
Landform: Narrow ridges
Landform position: Convex interfluves
Shape of areas: Elongated
Size of areas: 5 to 100 acres

Composition

Iredell soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—brown fine sandy loam that has black concretions

Subsurface layer:
4 to 6 inches—brown fine sandy loam that has black concretions

Subsoil:
6 to 23 inches—dark yellowish brown clay that has black concretions
23 to 27 inches—dark yellowish brown sandy clay loam that has dark brown mottles and black concretions

Underlying material:
27 to 54 inches—multicolored sandy clay loam saprolite in shades of white, gray, brown, yellow, and black

Bedrock:
54 to 60 inches—weathered mafic rock

Soil Properties and Qualities

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Very slow or slow
Available water capacity: Moderate
Seasonal high water table: At a depth of 1.0 to 2.0 feet from December through April
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Nearly level or gently sloping
Surface runoff: Medium
Hazard of water erosion: None to moderate
Parent material: Residuum weathered from mafic high-grade metamorphic or igneous rock
Depth to bedrock: 40 to more than 60 inches to soft bedrock; more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the well drained Wynott soils that have soft bedrock at a depth of 20 to 40 inches
• Random areas of Polkton soils that have soft bedrock at a depth of 20 to 40 inches
• The well drained Mayodan soils that have a subsoil that is redder than that of the Iredell soil and have a moderate shrink-swell potential; on the outer edge of map units
• The well drained Wadesboro soils that have a dark red subsoil and a moderate shrink-swell potential; on the outer edge of map units
• The well drained Pinoka soils that have soft bedrock at a depth of 20 to 40 inches and hard bedrock at a depth of 40 to more than 60 inches; on the outer edge of map units
• White Store soils that have a subsoil that is redder than that of the Iredell soil and have more acidity in the subsoil; on the outer edge of map units

Similar inclusions:
• Random areas of soils that have a surface layer of silt loam, loam, or sandy loam
• Random areas of soils that have stones and boulders on the surface and are usually shown on the map with a special symbol

Land Use

Dominant Uses: Pasture and cropland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility, root penetration, and wetness
Management measures and considerations:
• Resource management systems that include terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and rotations with soil-conserving crops help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.

• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, clover, and native bluegrass
Management concerns: Erodibility, wetness, and root penetration
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occurs when the soils are saturated.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Wetness and shrink-swell potential
Management measures and considerations:
• Reinforcing foundations and basements or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Constructing dwellings on raised, well-compacted fill material helps to reduce the risk of damage from wetness.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Installing geotextile fabric between the base aggregate and the final road surface helps to improve performance.
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 7C, based on loblolly pine as the indicator species

JoA—Johnston sandy loam, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Shape of areas: Long and narrow or oblong
Size of areas: 5 to 2,000 acres

Composition

Johnston soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 40 inches—black sandy loam

Underlying material:
40 to 50 inches—dark gray loamy sand
50 to 60 inches—gray sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately rapid
Available water capacity: Low
Seasonal high water table: 1.0 foot above the surface to 1.5 feet below from November through June
Hazard of flooding: Frequent for brief to long periods from November through April
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Recent alluvial sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The somewhat poorly drained Chewacla soils that have a loamy subsoil; near the outlet of the flood plain
• The poorly drained Rains soils that have a loamy subsoil; in the higher upland drainageways
• Random areas of poorly drained soils that have black surface layers less than 24 inches thick

Similar inclusions:
• Random areas of Johnston soils that have a surface layer of silt loam, fine sandy loam, or sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

This map unit may contain wetlands. The local office of the Natural Resources Conservation Service should be contacted for guidance.

Agricultural Development

Cropland

Suitability: Unsuited
Commonly grown crops: None
Management concerns:
• The frequent flooding and wetness are severe limitations affecting crop production. A site should be selected on better suited soils.
Management measures and considerations:
• This map unit is difficult to manage for cropland because of the potential for flooding during the growing season.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.

Pasture and hayland

Suitability: Unsuited
Management concerns:
• The frequent flooding and wetness are severe limitations affecting the production of pasture and hay crops. A site should be selected on better suited soils.
Management measures and considerations:
• Flooding may pose a hazard to livestock.

Woodland

Suitability: Poorly suited
Productivity class: Moderately high for yellow-poplar
Management concerns: Equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Using low-pressure ground equipment helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.
• Harvesting timber during summer helps to reduce the risk of damage from flooding.
• Maintaining drainageways and planting trees that are tolerant of wetness helps to increase seedling survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Unsuited
Management concerns:
• The flooding and ponding are severe limitations affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The flooding, ponding, and poor filtering capacity are severe limitations affecting septic tank absorption fields. A site should be selected on better suited soils.

Management measures and considerations:
• The Anson County Health Department should be contacted for additional guidance.

Local roads and streets

Suitability: Unsuited
Management concerns:
• The flooding and ponding are severe limitations affecting roads and streets. A site should be selected on better suited soils.

Interpretive Groups

Land capability classification: VIIw
Woodland ordination symbol: 7W, based on yellow-poplar as the indicator species

LgB—Lillington gravelly sandy loam, 2 to 8 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the eastern part of the county
Landform: Narrow ridges
Landform position: Convex interfluves
Shape of areas: Elongated
Size of areas: 10 to 200 acres

Composition

Lillington soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—grayish brown gravelly sandy loam

Subsurface layer:
7 to 16 inches—pale brown gravelly sandy loam

Subsoil:
16 to 19 inches—yellowish brown gravelly sandy loam
19 to 27 inches—strong brown very gravelly sandy clay loam
27 to 48 inches—strong brown very gravelly sandy clay loam that has yellowish red mottles
48 to 60 inches—red gravelly sandy loam that has yellowish red and yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: None or slight
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Dothan and Fuquay soils that have more than 5 percent plinthite; on the outer edge of map units
• Random areas of Ailey soils that have sandy surface layers more than 20 inches thick
• Emporia soils that have a perched water table between depth of 3.0 and 4.5 feet; on the outer edge of map units
• Random areas of Pacolet soils that have a clayey subsoil

Similar inclusions:
• Soils that have a surface layer of gravelly loamy sand or gravelly fine sandy loam
• Soils that have a surface layer of gravelly sandy loam that is more than 20 inches thick

Land Use

Dominant Uses: Source of gravel
Other Uses: Pasture, hayland, and cropland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Tobacco, corn, small grain, cotton, and soybeans
Management concerns: Droughtiness and soil fertility
Management measures and considerations:
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Bermudagrass, orchardgrass, legumes, and clover
Management concerns: Droughtiness and soil fertility
Management measures and considerations:
• Providing supplemental irrigation and selecting crop

varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIs
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

LgC—Lillington gravelly sandy loam, 8 to 15 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the eastern part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 10 to 200 acres

Composition

Lillington soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—grayish brown gravelly sandy loam

Subsurface layer:
7 to 16 inches—pale brown gravelly sandy loam

Subsoil:
16 to 19 inches—yellowish brown gravelly sandy loam
19 to 27 inches—strong brown very gravelly sandy clay loam
27 to 48 inches—strong brown very gravelly sandy clay loam that has yellowish red mottles
48 to 60 inches—red gravelly sandy loam that has yellowish red and yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Moderate
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Ailey soils that have sandy surface layers more than 20 inches thick
• Emporia soils that have a perched water table between depths of 3.0 and 4.5 feet; on the outer edge of map units and in the less sloping areas

• Random areas of Pacolet soils that have a clayey subsoil

Similar inclusions:
• Soils that have a surface layer of gravelly loamy sand or gravelly fine sandy loam
• Soils that have a surface layer of gravelly sandy loam that is more than 20 inches thick

Land Use

Dominant Uses: Source of gravel
Other Uses: Woodland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Tobacco, corn, small grain, cotton, and soybeans
Management concerns: Droughtiness, erodibility, and soil fertility
Management measures and considerations:
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Bermudagrass, orchardgrass, legumes, and clover
Management concerns: Droughtiness, erodibility, and soil fertility
Management measures and considerations:
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Slope and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines on the contour helps to improve the performance of septic tank absorption fields.

Local roads and streets

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVs
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MaB—Mayodan fine sandy loam, 2 to 8 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 500 acres

Composition

Mayodan soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
6 to 9 inches—yellowish red sandy clay loam that has light yellowish brown mottles

Subsoil:
9 to 24 inches—yellowish red clay that has yellowish red mottles
24 to 33 inches—yellowish red clay that has reddish yellow mottles
33 to 40 inches—reddish yellow sandy clay loam that has red, reddish yellow, and pinkish gray mottles

Underlying material:
40 to 72 inches—mottled reddish yellow, red, and pinkish gray sandy clay loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of less than 60 inches
• Random areas of the moderately well drained White Store soils that have very slow permeability
• Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
• The somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• The moderately well drained Iredell soils that have very slow permeability and less acidity in the subsoil than the Mayodan soil; on small elongated knolls
• Random areas of the dark red Wadesboro soils that have soft bedrock at a depth of 40 to 60 inches

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Mayodan soil
• Random areas of Granville soils that have a loamy subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the

slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affect woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MaC—Mayodan fine sandy loam, 8 to 15 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 5 to 100 acres

Composition

Mayodan soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsurface layer:
6 to 9 inches—yellowish red sandy clay loam that has light yellowish brown mottles

Subsoil:
9 to 24 inches—yellowish red clay that has yellowish red mottles
24 to 33 inches—yellowish red clay that has reddish yellow mottles
33 to 40 inches—reddish yellow sandy clay loam that has red, reddish yellow, and pinkish gray mottles

Underlying material:
40 to 72 inches—mottled reddish yellow, red, and pinkish gray sandy clay loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping

Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
• Random areas of the moderately well drained White Store soils that have very slow permeability
• The somewhat poorly drained Creedmoor soils on the less sloping side slopes
• Random areas of the dark red Wadesboro soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of 20 to 40 inches

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Mayodan soil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential and slope
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during

periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MgB—Mayodan gravelly sandy loam, 2 to 8 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 400 acres

Composition

Mayodan soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—strong brown gravelly sandy loam

Subsoil:
3 to 12 inches—red clay
12 to 19 inches—red clay that has reddish yellow mottles
19 to 32 inches—mottled red, yellow, and light gray clay loam

Underlying material:
32 to 60 inches—mottled yellow, red, and light gray loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from conglomerate of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of the moderately well drained White Store soils that have very slow permeability
• Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
• Random areas of soils that have soft bedrock at a depth of less than 60 inches
• The somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• The moderately well drained Iredell soils that have very slow permeability and less acidity in the subsoil than the Mayodan soil; on small elongated knolls
• Random areas of the dark red Wadesboro soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of Pinoka soils that have a loamy subsoil and have hard bedrock at a depth of 20 to 40 inches

Similar inclusions:
• Random areas of soils that have a surface layer of fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Mayodan soil
• Random areas of Granville soils that have a loamy subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage,

no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MgC—Mayodan gravelly sandy loam, 8 to 15 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Irregular
Size of areas: 10 to 700 acres

Composition

Mayodan soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 3 inches—strong brown gravelly sandy loam

Subsoil:
3 to 12 inches—red clay
12 to 19 inches—red clay that has reddish yellow mottles
19 to 32 inches—mottled red, yellow, and light gray clay loam

Underlying material:
32 to 60 inches—mottled yellow, red, and light gray loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from conglomerate of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- Random areas of the moderately well drained White Store soils that have very slow permeability
- Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
- Random areas of the dark red Wadesboro soils that have soft bedrock at a depth of 40 to 60 inches
- Random areas of Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of 20 to 40 inches
- The somewhat poorly drained Creedmoor soils on the less sloping side slopes

Similar inclusions:
- Random areas of soils that have a surface layer of fine sandy loam, silt loam, sandy clay loam, or clay loam
- Random areas of soils that have a subsoil that is redder than that of the Mayodan soil
- Random areas of soils that have a clayey subsoil and slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
- There are no significant limitations affecting woodland management.

Management measures and considerations:
- Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope and shrink-swell potential
Management measures and considerations:
- Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
- Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
- The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope helps to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MgD—Mayodan gravelly sandy loam, 15 to 25 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes and narrow ridges
Landform position: Convex side slopes and nose slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Mayodan soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

Surface layer:
0 to 3 inches—strong brown gravelly sandy loam

Subsoil:
3 to 12 inches—red clay
12 to 19 inches—red clay that has reddish yellow mottles
19 to 32 inches—mottled red, yellow, and light gray clay loam

Underlying material:
32 to 60 inches—mottled yellow, red, and light gray loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Moderately steep
Surface runoff: Rapid
Hazard of water erosion: Very severe
Parent material: Residuum weathered from conglomerate of the Triassic Basin
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of the moderately well drained White Store soils that have very slow permeability
• Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
• Random areas of soils that have soft bedrock at a depth of 40 to 60 inches
• Random areas of soils that have a clayey subsoil and slow permeability
• Random areas of Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of 20 to 40 inches

Similar inclusions:
• Random areas of soils that have a surface layer of fine sandy loam, silt loam, sandy clay loam, or clay loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• This map unit is difficult to manage for cultivated crops because the slope limits equipment use.
• Applying lime and fertilizer according to

recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope limits equipment use in the steeper areas.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility and equipment use
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 9R, based on loblolly pine as the indicator species

MnC—Mayodan-Urban land complex, 4 to 10 percent slopes

Setting

Landscape: Triassic Basin; mainly in and around Wadesboro, White Store, and Polkton
Landform: Broad ridges and hillslopes
Landform position: Interfluves
Shape of areas: Rectangular or irregular
Size of areas: 5 to 700 acres

Composition

Mayodan soil and similar inclusions: 55 percent
Urban land: 30 percent
Dissimilar inclusions: 15 percent

Typical Profile

Mayodan

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

Subsurface layer:
6 to 9 inches—yellowish red sandy clay loam that has yellowish brown mottles

Subsoil:
9 to 24 inches—yellowish red clay that has yellowish red mottles
24 to 33 inches—yellowish red clay that has reddish yellow mottles
33 to 40 inches—reddish yellow sandy clay loam that has red, reddish yellow, and pinkish gray mottles

Underlying material:
40 to 72 inches—mottled reddish yellow, red, and pinkish gray sandy clay loam saprolite

Urban land

Urban land consists of areas mostly covered by commercial, industrial, or other urban buildings; paved streets and sidewalks; paved parking lots; closely spaced houses; or other impervious material. Identification of the natural soil is not feasible.

Soil Properties and Qualities

Depth class: Mayodan—very deep; Urban land—not applicable
Drainage class: Mayodan—well drained; Urban land—not applicable
Permeability: Mayodan—moderate; Urban land—not applicable
Available water capacity: Mayodan—high; Urban land—not applicable
Depth to seasonal high water table: Mayodan—more than 6.0 feet; Urban land—not applicable
Hazard of flooding: None
Shrink-swell potential: Mayodan—moderate; Urban land—not applicable
Slope class: Gently sloping to strongly sloping
Surface runoff: Mayodan—medium; Urban land—rapid or very rapid
Hazard of water erosion: Mayodan—moderate; Urban land—not applicable
Parent material: Mayodan—residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin; Urban land—not applicable
Depth to bedrock: Mayodan—more than 60 inches; Urban land—not applicable

Minor Components

Dissimilar inclusions:
• Random areas of Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of less than 60 inches
• Random areas of the moderately well drained White Store soils that have very slow permeability
• Random areas of the moderately well drained Polkton soils that have very slow permeability and have soft bedrock at a depth of 20 to 40 inches
• The somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• The moderately well drained Iredell soils that have very slow permeability and less acidity in the subsoil than the Mayodan soil; on small elongated knolls
• Random areas of the dark red Wadesboro soils that have soft bedrock at a depth of 40 to 60 inches

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a clayey subsoil and slow permeability

Land Use

Dominant Uses: Urban development
Other Uses: None

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Small garden crops
Management concerns: Limited size of natural soil areas
Management measures and considerations:
• This map unit is difficult to manage for crop production because of the limited size of the areas, intermittent areas of Urban land, and areas of highly disturbed soils.

Pasture and hayland

Suitability: Poorly suited
Management concerns: Limited size of natural soil areas
Management measures and considerations:
• The production of pasture and hay crops is generally not feasible in this map unit because of the limited size of the areas, intermittent areas of Urban land, and areas of highly disturbed soils.

Woodland

Suitability: Poorly suited
Productivity class: Not applicable
Management concerns: Limited size of natural soil areas

Management measures and considerations:
• Since timber production is rarely feasible in this map unit because of the limited size of the areas and intermittent areas of Urban land, planting trees should be considered primarily for aesthetic purposes.

Urban Development

Dwellings

Suitability: Mayodan—suited; Urban land—not applicable
Management concerns: Mayodan—shrink-swell potential; Urban land—not applicable
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material in areas of the Mayodan soil helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Mayodan—suited; Urban land—not applicable
Management concerns: Mayodan—restricted permeability; Urban land—not applicable
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Mayodan—poorly suited; Urban land—not applicable
Management concerns: Mayodan—low strength; Urban land—not applicable
Management measures and considerations:
• Carefully planning the location of roads helps to minimize disturbance of existing structures.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: Mayodan—IIIe; Urban land—VIIIs
Woodland ordination symbol: None assigned

MrB—McQueen loam, 1 to 6 percent slopes

Setting

Landscape: Piedmont, Upper Coastal Plain, and Sandhills; along major streams and rivers
Landform: High stream terraces
Landform position: Planar to slightly convex slopes
Shape of areas: Elongated
Size of areas: 5 to 75 acres

Composition

McQueen soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—brown loam

Subsoil:
5 to 26 inches—red clay
26 to 45 inches—red clay that has strong brown and yellowish red mottles
45 to 55 inches—red silty clay loam that has strong brown and yellowish red mottles

Underlying material:
55 to 62 inches—strong brown silt loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Seasonal high water table: At a depth of 4.0 to 6.0 feet from January through March
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Nearly level or gently sloping
Surface runoff: Slow or medium
Hazard of water erosion: Moderate
Parent material: Old alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The moderately well drained Tetotum soils in the slightly lower-lying positions
• State soils that have a loamy subsoil and moderate permeability; in the slightly lower-lying positions
• Riverview and Shellbluff soils that have a loamy subsoil; in the slightly lower-lying areas near flood plains

Similar inclusions:
• Hiwassee soils that have a dark red subsoil and moderate permeability; in the slightly higher positions
• Random areas of soils that have less clay in the subsoil than the McQueen soil
• Random areas of McQueen soils that have a surface layer of sandy loam or fine sandy loam
• Random areas of soils that have a yellow or brown subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, alfalfa, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns for dwellings without basements: Shrink-swell potential
Management concerns for dwellings with basements: Wetness and shrink-swell potential
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Moderately suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

MsA—Misenheimer-Callison complex, 0 to 3 percent slopes

Setting

Landscape: Piedmont; mainly in the western part of the county in the Carolina Slate Belt

Landform: Broad upland flats, drainageways, and heads of drainageways
Landform position: Planar to slightly convex interfluves
Shape of areas: Oblong or irregular
Size of areas: 5 to 400 acres

Composition

Misenheimer soil and similar inclusions: 55 percent
Callison soil and similar inclusions: 30 percent
Dissimilar inclusions: 15 percent

Typical Profile

Misenheimer

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

Subsurface layer:
7 to 12 inches—pale yellow channery silt loam that has yellowish brown mottles

Subsoil:
12 to 18 inches—yellowish brown channery silty clay loam that has light gray and light olive brown mottles

Bedrock:
18 to 32 inches—weathered fractured argillite
32 inches—unweathered argillite

Callison

Surface layer:
0 to 7 inches—brown silt loam

Subsoil:
7 to 14 inches—light yellowish brown silt loam that has yellowish brown mottles
14 to 22 inches—light olive brown silty clay loam that has yellowish brown and light gray mottles
22 to 28 inches—light olive brown channery silty clay loam that has light gray and yellowish brown mottles

Bedrock:
28 to 55 inches—weathered fractured slate that has seams of light gray clay in cracks
55 inches—unweathered fractured slate

Soil Properties and Qualities

Depth class: Misenheimer—shallow; Callison—moderately deep
Drainage class: Moderately well drained
Permeability: Misenheimer—moderately rapid; Callison—moderately slow
Available water capacity: Misenheimer—low; Callison—moderate
Seasonal high water table: Misenheimer—at a depth of 1.0 to 1.5 feet from December through April; Callison—at a depth of 1.5 to 3.0 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level or gently sloping
Surface runoff: Medium or slow
Hazard of water erosion: None to moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: Misenheimer—10 to 20 inches to soft bedrock and 20 to more than 40 inches to hard bedrock; Callison—20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
- The well drained Badin soils that have a subsoil that is redder than those of the Misenheimer and Callison soils; on small ridges and small knolls
- The well drained Tarrus and Nanford soils that have soft bedrock at a depth of 40 to 60 inches; on small ridges and small knolls
- The well drained Goldston soils on small ridges and small knolls
- Random areas of deep and very deep loamy soils in the lower areas
- Deep, clayey soils in the slightly lower-lying flat areas

Similar inclusions:
- Random areas of Misenheimer and Callison soils that have a loam surface layer
- Random areas of Misenheimer and Callison soils that have less acidity in the lower part of the subsoil and in the underlying material

Land Use

Dominant Uses: Woodland and pasture
Other Uses: Cropland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Wetness and soil fertility
Management measures and considerations:
- Performing tillage and harvesting when the soils are not wet helps to prevent clodding and rutting by equipment.
- Installing an artificial drainage system helps to

reduce the wetness limitation and improve soil productivity.
• Planting wetness-tolerant species in undrained areas helps to improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Wetness and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soils are too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Incorporating plant residue into the soils helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soils.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Misenheimer—suited; Callison—well suited
Productivity class: Misenheimer—moderately high for shortleaf pine; Callison—high for loblolly pine
Management concerns: Misenheimer—equipment use, seedling survival, and windthrow hazard; Callison—no significant limitations
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Planting improved varieties of loblolly pine helps to increase productivity.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occurs when the soils are saturated.
• Bedding the soils prior to planting helps to establish seedlings and increase their survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth of the Misenheimer soil.

Urban Development

Dwellings

Suitability for dwellings without basements: Misenheimer—poorly suited; Callison—suited
Suitability for dwellings with basements: Poorly suited
Management concerns for dwellings without basements: Wetness
Management concerns for dwellings with basements: Wetness and depth to bedrock
Management measures and considerations:
• Constructing dwellings on raised, well-compacted fill material helps to reduce the risk of damage from wetness.
• Using artificial drainage or diversions helps to remove excess surface water.
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soils.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.
• A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness, depth to bedrock, and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use these severely limited soils for septic tank systems.

Local roads and streets

Suitability: Misenheimer—suited; Callison—poorly suited
Management concerns: Misenheimer—wetness and depth to bedrock; Callison—low strength
Management measures and considerations:
• Blasting or special grading equipment may be needed in the construction of roads.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Designing roads so that they safely remove surface runoff helps to improve soil performance.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: Misenheimer—IIIw; Callison—IIw

Woodland ordination symbol: Misenheimer—6D, based on shortleaf pine as the indicator species; Callison—7W, based on loblolly pine as the indicator species

NaB—Nanford silt loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the northern and southern parts of the county in the Carolina Slate Belt
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 250 acres

Composition

Nanford soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—brown silt loam

Subsoil:
6 to 18 inches—yellowish red silty clay
18 to 31 inches—yellowish red silty clay that has brownish yellow and red mottles
31 to 41 inches—red silty clay loam that has brownish yellow mottles

Underlying material:
41 to 56 inches—mottled brown, red, and brownish yellow silt loam saprolite

Bedrock:
56 to 60 inches—weathered schist

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from schist and other fine-grained metamorphic rocks of the Carolina Slate Belt
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and the outer edge of map units
• The moderately well drained Misenheimer and Callison soils in the slightly lower-lying positions and along drainageways
• Random areas of eroded Nanford soils that have a surface layer of silty clay or silty clay loam
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Nanford soils that have a surface layer of gravelly sandy loam, gravelly loam, or gravelly fine sandy loam
• Random areas of Tarrus soils that have a red subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland and pasture

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, alfalfa, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the

slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• This map unit has few limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

NaC—Nanford silt loam, 8 to 15 percent slopes

Setting

Landscape: Piedmont; mainly in the northern and southern parts of the county in the Carolina Slate Belt
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 5 to 100 acres

Composition

Nanford soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—brown silt loam

Subsoil:
6 to 18 inches—yellowish red silty clay
18 to 31 inches—yellowish red silty clay that has brownish yellow and red mottles
31 to 41 inches—red silty clay loam that has brownish yellow mottles

Underlying material:
41 to 56 inches—mottled brown, red, and brownish yellow silt loam saprolite

Bedrock:
56 to 60 inches—weathered schist

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate

Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from schist and other fine-grained metamorphic rocks of the Carolina Slate Belt
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Goldston soils that have soft bedrock at a depth of less than 20 inches; on small knolls and the outer edge of map units
• The moderately well drained Misenheimer and Callison soils in the slightly lower-lying positions and along drainageways
• Random areas of eroded Nanford soils that have a surface layer of silty clay or silty clay loam
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Nanford soils that have a surface layer of gravelly sandy loam, gravelly loam, or gravelly fine sandy loam
• Random areas of Tarrus soils that have a red subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, alfalfa, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• This map unit has few limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential and slope
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock, slope, and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Installing septic system distribution lines on the contour helps to improve the performance of septic tank absorption fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

NgC—Nanford gravelly fine sandy loam, 8 to 15 percent slopes

Setting

Landscape: Piedmont-Coastal Plain contact; mainly in the southern part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

Nanford soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsurface layer:
5 to 7 inches—pale brown gravelly fine sandy loam

Subsoil:
7 to 15 inches—strong brown silty clay loam that has red mottles
15 to 27 inches—yellowish red clay that has reddish yellow mottles
27 to 37 inches—yellowish red silty clay loam that has reddish yellow mottles

Underlying material:
37 to 55 inches—reddish yellow silt loam saprolite

Bedrock:
55 to 60 inches—weathered slate rock

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Emporia soils that have soft bedrock at a depth of more than 60 inches and have a loamy subsoil; on the outer edge of map units
• Random areas of eroded Nanford soils that have a surface layer of silty clay or silty clay loam
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Nanford soils that have a surface layer of loamy sand or sandy loam
• Random areas of Tarrus soils that have a red subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton

Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, alfalfa, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• This map unit has few limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential and slope
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, helps to keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock, restricted permeability, and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

NsB—Nanford-Emporia complex, 2 to 8 percent slopes

Setting

Landscape: Piedmont-Coastal Plain contact; mainly in the southern part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 250 acres

Composition

Nanford soil and similar inclusions: 44 percent

Emporia soil and similar inclusions: 36 percent
Dissimilar inclusions: 20 percent

Typical Profile

Nanford

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

Subsurface layer:
5 to 7 inches—pale brown gravelly fine sandy loam

Subsoil:
7 to 15 inches—strong brown silty clay loam that has red mottles
15 to 27 inches—yellowish red clay that has reddish yellow mottles
27 to 37 inches—yellowish red silty clay loam that has reddish yellow mottles

Underlying material:
37 to 55 inches—reddish yellow silt loam saprolite

Bedrock:
55 to 60 inches—weathered slate rock

Emporia

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

Subsurface layer:
7 to 11 inches—brownish yellow gravelly sandy loam

Subsoil:
11 to 30 inches—yellowish brown clay loam
30 to 40 inches—yellowish brown sandy clay loam that has yellowish red and strong brown mottles
40 to 50 inches—mottled light gray, strong brown, and red clay loam

Underlying material:
50 to 60 inches—mottled white, light brown, and yellowish red sandy loam

Soil Properties and Qualities

Depth class: Nanford—deep; Emporia—very deep
Drainage class: Well drained
Permeability: Nanford—moderate; Emporia—moderate or moderately slow in the upper part and moderately slow or slow in the lower part
Available water capacity: Nanford—high; Emporia—moderately high
Seasonal high water table: Nanford—at a depth of more than 6.0 feet; Emporia—at a depth of 3.0 to 4.5 feet from November through April
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Nanford—residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt; Emporia—loamy and clayey marine sediments
Depth to bedrock: Nanford—40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock; Emporia—more than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of 20 to 40 inches
• Emporia soils that have soft bedrock at a depth of more than 60 inches and have a loamy subsoil; on the outer edge of map units
• Random areas of eroded Nanford soils that have a surface layer of silty clay or silty clay loam
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Nanford soils that have a surface layer of loamy sand or sandy loam
• Random areas of Tarrus soils that have a red subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland and pasture

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, alfalfa, legumes, and clover

Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soils are too wet helps to maintain a protective plant cover.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• This map unit has few limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability for dwellings without basements: Nanford—suited; Emporia—well suited
Suitability for dwellings with basements: Suited
Management concerns for dwellings without basements: Nanford—shrink-swell potential; Emporia—no major limitations
Management concerns for dwellings with basements: Nanford—shrink-swell potential; Emporia—shrink-swell potential and wetness
Management measures and considerations:
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Using artificial drainage or diversions helps to remove excess surface water.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep sediments onsite.

Septic tank absorption fields

Suitability: Nanford—suited; Emporia—poorly suited
Management concerns: Nanford—depth to bedrock and restricted permeability; Emporia—restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soils are not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Nanford—poorly suited; Emporia—suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 9A in areas of the Nanford soil and 9S in areas of the Emporia soil

PgB—Pacolet gravelly sandy loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the eastern and southeastern parts of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 600 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—brown gravelly sandy loam

Subsoil:
5 to 25 inches—red gravelly clay loam
25 to 40 inches—red gravelly fine sandy loam

Underlying material:
40 to 60 inches—mottled red and yellowish red gravelly fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Slight
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- Random areas of soils that have hard bedrock at a depth of less than 60 inches
- Random areas of Pacolet soils that have a surface layer of sandy clay loam or clay loam
- Lillington soils that have a very gravelly loamy subsoil; on the outer edge of some map units
- Random areas of Emporia soils that have a loamy subsoil and have slow permeability in the lower part of the subsoil

Similar inclusions:
- Random areas of soils that have a yellow subsoil
- Random areas of Hiwassee soils that have a dark red subsoil
- Random areas of soils that have a loamy subsoil
- Random areas of Cecil soils that have saprolite at a depth of more than 40 inches
- Random areas of Pacolet soils that have a surface layer of loam, sandy loam, or fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Cropland, pasture, and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Resource management systems that include terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and rotations with soil-conserving crops help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
- Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, and legumes
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
- Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
- There are no significant limitations affecting woodland management.

Management measures and considerations:
- Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
- There are no significant limitations affecting dwellings.

Management measures and considerations:
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability

Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8A, based on loblolly pine as the indicator species

PgC—Pacolet gravelly sandy loam, 8 to 15 percent slopes

Setting

Landscape: Piedmont; mainly in the eastern and southern parts of the county
Landform: Hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 10 to 200 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—brown gravelly sandy loam

Subsoil:
5 to 25 inches—red gravelly clay loam
25 to 40 inches—red gravelly fine sandy loam

Underlying material:
40 to 60 inches—mottled red and yellowish red gravelly fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Moderate
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of soils that have hard bedrock at a depth of less than 60 inches
• Random areas of Pacolet soils that have a surface layer of sandy clay loam or clay loam
• Random areas of Pacolet soils that have a surface layer of fine sandy loam
• Lillington soils that have a very gravelly loamy subsoil; on the outer edge of some map units

Similar inclusions:
• Random areas of soils that have a yellow subsoil
• Random areas of Hiwassee soils that have a dark red subsoil
• Random areas of soils that have a loamy subsoil
• Random areas of Cecil soils that have saprolite at a depth of more than 40 inches
• Random areas of Pacolet soils that have a surface layer of loam, sandy loam, or fine sandy loam

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, and legumes
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8A, based on loblolly pine as the indicator species

PgD—Pacolet gravelly sandy loam, 15 to 25 percent slopes

Setting

Landscape: Piedmont; mainly in the eastern and southern parts of the county
Landform: Hillslopes and narrow ridges
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 10 to 200 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—brown gravelly sandy loam

Subsoil:
5 to 25 inches—red gravelly clay loam
25 to 40 inches—red gravelly fine sandy loam

Underlying material:
40 to 60 inches—mottled red and yellowish red gravelly fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate

Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Moderately steep
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of soils that have hard bedrock at a depth of less than 60 inches
• Random areas of Pacolet soils that have a surface layer of sandy clay loam or clay loam
• Random areas of Pacolet soils that have a surface layer of fine sandy loam
• Lillington soils that have a very gravelly loamy subsoil; on the outer edge of some map units

Similar inclusions:
• Random areas of soils that have a yellow subsoil
• Random areas of soils that have a loamy subsoil
• Cecil soils that have saprolite at a depth of more than 40 inches; in the less sloping areas
• Random areas of Pacolet soils that have a surface layer of loam, sandy loam, or fine sandy loam
• Hiwassee soils that have a dark red subsoil; on the upper side slopes

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: None
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• This map unit is difficult to manage for cultivated crops because the slope limits equipment use.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, and legumes
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• The slope limits equipment use in the steeper areas.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pastures.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility and equipment use
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 8R, based on loblolly pine as the indicator species

PgE—Pacolet gravelly sandy loam, 25 to 45 percent slopes

Setting

Landscape: Piedmont; mainly in the eastern and southern parts of the county
Landform: Hillslopes and narrow ridges
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 10 to 100 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—brown gravelly sandy loam

Subsoil:
5 to 25 inches—red gravelly clay loam
25 to 40 inches—red gravelly fine sandy loam

Underlying material:
40 to 60 inches—mottled red and yellowish red gravelly fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Steep
Surface runoff: Rapid
Hazard of water erosion: Very severe
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of soils that have hard bedrock at a depth of less than 60 inches
• Random areas of Pacolet soils that have a surface layer of sandy clay loam or clay loam
• Random areas of Pacolet soils that have a surface layer of fine sandy loam

Similar inclusions:
• Random areas of soils that have a yellow subsoil
• Random areas of soils that have a loamy subsoil
• Random areas of Pacolet soils that have a surface layer of loam, sandy loam, or fine sandy loam
• Hiwassee soils that have a dark red subsoil; on the less sloping side slopes

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Unsuited
Commonly grown crops: None
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• This map unit is difficult to manage for cultivated crops because the slope limits equipment use.
• A site should be selected on better suited soils.

Pasture and hayland

Suitability for pasture: Poorly suited
Suitability for hayland: Unsuited
Commonly grown crops: Tall fescue, orchardgrass, and legumes

Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• This map unit has severe limitations affecting the production of hay crops. A site should be selected on better suited soils.
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• The slope limits equipment use in the steeper areas.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating pastures.

Woodland

Suitability: Poorly suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility and equipment use
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIIe
Woodland ordination symbol: 8R, based on loblolly pine as the indicator species

PmB2—Pacolet clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the eastern and southern parts of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—reddish brown clay loam

Subsoil:
4 to 18 inches—red clay
18 to 32 inches—yellowish red sandy loam

Underlying material:
32 to 63 inches—yellowish red fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet

Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of soils that have hard bedrock at a depth of less than 60 inches
• Random areas of Tarrus soils that have soft bedrock at a depth of 40 to 60 inches

Similar inclusions:
• Random areas of soils that have a yellow subsoil
• Random areas of soils that have a loamy subsoil
• Random areas of Cecil soils that have saprolite at a depth of more than 40 inches
• Random areas of Pacolet soils that have a surface layer of sandy loam, loam, or the gravelly analogues of those textures

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and rotations with soil-conserving crops help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.
• Performing tillage only during periods when the soil is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, and legumes
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.
Management measures and considerations:
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 8C, based on loblolly pine as the indicator species

PmC2—Pacolet clay loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the eastern and southern parts of the county
Landform: Hillslopes
Landform position: Convex side slopes and nose slopes
Shape of areas: Elongated
Size of areas: 10 to 250 acres

Composition

Pacolet soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—reddish brown clay loam

Subsoil:
4 to 18 inches—red clay
18 to 32 inches—yellowish red sandy loam

Underlying material:
32 to 63 inches—yellowish red fine sandy loam saprolite

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Medium
Hazard of water erosion: Very severe
Parent material: Residuum weathered from porphyritic granite
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of soils that have hard bedrock at a depth of less than 60 inches
• Random areas of Tarrus soils that have soft bedrock at a depth of 40 to 60 inches

Similar inclusions:
• Random areas of soils that have a yellow subsoil
• Random areas of soils that have a loamy subsoil
• Random areas of Cecil soils that have saprolite at a depth of more than 40 inches
• Random areas of Pacolet soils that have a surface layer of sandy loam, loam, or the gravelly analogues of those textures

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to prevent further erosion by stabilizing the soil, controlling surface runoff, and maximizing the infiltration of water.
• Incorporating crop residue into the soil or leaving residue on the soil surface helps to minimize clodding and crusting and maximizes the infiltration of water.
• Performing tillage only during periods when the soil

is not wet helps to minimize clodding and crusting and increase the infiltration of water.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, and legumes
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8C, based on loblolly pine as the indicator species

PnB—Pelion loamy sand, 1 to 4 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county

Landform: Upland depressions and heads of drainageways
Landform position: Convex interfluves
Shape of areas: Elongated or irregular
Size of areas: 5 to 50 acres

Composition

Pelion soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—grayish brown loamy sand

Subsurface layer:
6 to 10 inches—brown loamy sand

Subsoil:
10 to 18 inches—light olive brown sandy clay loam
18 to 24 inches—light olive brown sandy clay loam that has reddish yellow and light gray mottles
24 to 40 inches—light gray sandy clay loam that has yellowish brown and red mottles
40 to 65 inches—brownish yellow sandy clay loam that has light brown and light gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow or moderately slow
Available water capacity: Moderate
Seasonal high water table: At a depth of 1.0 to 2.5 feet from November through April
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level or gently sloping
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained Emporia soils in the slightly higher positions
• The poorly drained Rains soils in low-lying depressional areas
• Random areas of soils that have more clay in the subsoil than the Pelion soil
• Random areas of soils that have a sandy subsoil

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly loamy sand or gravelly sandy loam
• Random areas of soils that have a surface layer of sandy loam or fine sandy loam

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Soil blowing, wetness, and soil fertility
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, bermudagrass, legumes, and clover
Management concerns: Soil blowing, wetness, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Installing a subsurface drainage system helps to improve the productivity of moisture-sensitive crops, such as alfalfa.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and windthrow hazard
Management measures and considerations:
• Performing logging operations during periods when the soil is not saturated helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.

• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

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

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.
• Increasing the size of the septic tank absorption field helps to improve its performance.

Local roads and streets

Suitability: Suited
Management concerns: Wetness
Management measures and considerations:
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 9W, based on loblolly pine as the indicator species

PoB—Pinoka-Carbonton complex, 2 to 8 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 300 acres

Composition

Pinoka soil and similar inclusions: 44 percent
Carbonton soil and similar inclusions: 41 percent
Dissimilar inclusions: 15 percent

Typical Profile

Pinoka

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

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

Subsoil:
10 to 25 inches—strong brown sandy clay loam that has red mottles
25 to 30 inches—strong brown loam that has red mottles

Bedrock:
30 to 60 inches—weathered Triassic sandstone

Carbonton

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

Subsoil:
5 to 20 inches—red clay
20 to 28 inches—red clay loam that has reddish brown mottles

Bedrock:
28 to 60 inches—weathered Triassic sandstone

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Pinoka—well drained; Carbonton—somewhat poorly drained
Permeability: Pinoka—moderately rapid; Carbonton—slow
Available water capacity: Pinoka—low; Carbonton—moderate
Seasonal high water table: Pinoka—at a depth of more than 6.0 feet; Carbonton—at a depth of 1.0 to 2.0 feet from November through May
Hazard of flooding: None
Shrink-swell potential: Pinoka—low; Carbonton—moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from Triassic sandstone, mudstone, siltstone, conglomerate, or shale of the Triassic Basin

Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Wadesboro soils that have a dark red subsoil and have soft bedrock at a depth of more than 40 inches
• Random areas of Polkton and White Store soils that have very slow permeability
• The moderately well drained or somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• The moderately well drained Iredell soils that have very slow permeability; on small knolls
• Mayodan soils that have a clayey subsoil; on broad ridges

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than those of the Pinoka and Carbonton soils
• Random areas of soils that have a clayey subsoil and slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Soil blowing, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Incorporating plant residue into the soils helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soils.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Soil blowing, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soils are too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Incorporating plant residue into the soils helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soils.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderate for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Pinoka—suited; Carbonton—poorly suited
Suitability for dwellings with basements: Poorly suited
Management concerns: Pinoka—depth to bedrock; Carbonton—wetness and depth to bedrock
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soils.

• Constructing dwellings on raised, well compacted fill material helps to reduce the risk of damage from wetness.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Pinoka—depth to bedrock; Carbonton—wetness and depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Suited
Management concerns: Pinoka—depth to bedrock; Carbonton—wetness and depth to bedrock
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: Pinoka—IIIe; Carbonton—IIe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Pinoka soil and 8W in areas of the Carbonton soil

PsC—Pinoka fine sandy loam, 8 to 15 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 5 to 600 acres

Composition

Pinoka soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

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

Subsoil:
10 to 25 inches—strong brown sandy clay loam that has red mottles
25 to 30 inches—strong brown loam that has red mottles

Bedrock:
30 to 60 inches—weathered Triassic sandstone

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from sandstone, mudstone, siltstone, conglomerate, or shale of the Triassic Basin
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Wadesboro soils that have a dark red subsoil and have soft bedrock at a depth of more than 40 inches
• Random areas of soils that have soft bedrock at a depth of less than 20 inches
• Random areas of Polkton soils that have an extremely firm subsoil
• The moderately well drained or somewhat poorly drained Creedmoor soils in the slightly lower-lying positions
• Random areas of Wynott soils that have very slow permeability
• Mayodan soils that have a clayey subsoil; on broad ridges

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Pinoka soil
• Random areas of soils that have a clayey subsoil and slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Soil blowing, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Soil blowing, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderate for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability for dwellings without basements: Suited
Suitability for dwellings with basements: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible

after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8D, based on loblolly pine as the indicator species

PsD—Pinoka fine sandy loam, 15 to 30 percent slopes

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes
Landform position: Planar side slopes
Shape of areas: Long and narrow
Size of areas: 5 to 300 acres

Composition

Pinoka soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

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

Subsoil:
10 to 25 inches—strong brown sandy clay loam that has red mottles
25 to 30 inches—strong brown loam that has red mottles

Bedrock:
30 to 60 inches—weathered Triassic sandstone

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Excessively drained to well drained
Permeability: Moderately rapid
Available water capacity: Very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Moderately steep
Surface runoff: Very rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from sandstone, mudstone, siltstone, conglomerate, or shale of the Triassic Basin
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of soils that have soft bedrock at a depth of less than 20 inches
• Random areas of Polkton soils that have an extremely firm subsoil
• The moderately well drained or somewhat poorly drained Creedmoor soils on footslopes
• Random areas of Mayodan soils that have a clayey subsoil

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of soils that have a subsoil that is redder than that of the Pinoka soil
• Random areas of soils that have a clayey subsoil and slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Erodibility, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• The slope limits equipment use in the steeper areas.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Low for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Installing broad-based dips, water bars, and culverts helps to stabilize logging roads, skid trails, and landings.
• Reseeding all disturbed areas with adapted grasses and legumes helps to prevent erosion.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Depth to bedrock and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 8D, based on loblolly pine as the indicator species

PwB3—Polkton-White Store complex, 2 to 8 percent slopes, severely eroded

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 1,000 acres

Composition

Polkton soil and similar inclusions: 50 percent

White Store soil and similar inclusions: 35 percent
Dissimilar inclusions: 15 percent

Typical Profile

Polkton

Surface layer:
0 to 7 inches—reddish brown sandy clay loam

Subsoil:
7 to 18 inches—red clay that has brown mottles
18 to 24 inches—red clay that has brown and light gray mottles
24 to 36 inches—dark reddish brown clay loam

Bedrock:
36 to 52 inches—weathered Triassic siltstone
52 inches—unweathered Triassic siltstone

White Store

Surface layer:
0 to 5 inches—yellowish red clay loam

Subsoil:
5 to 20 inches—red clay
20 to 42 inches—red clay that has pinkish gray mottles
42 to 48 inches—red clay
48 to 52 inches—dark reddish brown clay loam

Bedrock:
52 to 60 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Polkton—moderately deep; White Store—deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: Moderate
Seasonal high water table: Polkton—at a depth of 1.5 to 2.5 feet from December through March; White Store—at a depth of 1.0 to 1.5 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from Triassic siltstone, sandstone, shale, and mudstone
Depth to bedrock: Polkton—20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock; White Store—40 to 72 inches to soft bedrock and more than 72 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the well drained Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of less than 20 inches
• Random areas of the well drained Mayodan soils that have moderate permeability
• The well drained Wadesboro soils that have a dark red subsoil and moderate permeability; in the slightly steeper areas
• Creedmoor soils in the slightly lower-lying positions
• Iredell soils that have less acidity in the subsoil than the Polkton and White Store soils; on small knolls
• Gullies; commonly along old field rows

Similar inclusions:
• Random areas of soils that have a gravelly surface layer
• Random areas of well drained soils that have very slow permeability
• Soils that do not have an erosion hazard or have a slight erosion hazard; in low-lying depressional areas

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Applying large granules or banding of phosphorus helps to overcome phosphorus fixation.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, root penetration, and soil fertility

Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Erodibility, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Performing logging operations only during periods when the soils are not wet helps to prevent rutting of the soil surface and possible root damage from compaction.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential and wetness
Management measures and considerations:
• Constructing dwellings on raised, well-compacted fill material helps to reduce the risk of damage from wetness.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Polkton—depth to bedrock, restricted permeability, and wetness; White Store—restricted permeability and wetness
Management measures and considerations:
• This map unit is severely limited for septic tank absorption fields. The Anson County Health Department should be contacted for additional guidance.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soils are not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Polkton soil and 9C in areas of the White Store soil

PwC3—Polkton-White Store complex, 8 to 15 percent slopes, severely eroded

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Narrow ridges and hillslopes
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 500 acres

Composition

Polkton soil and similar inclusions: 50 percent
White Store soil and similar inclusions: 35 percent
Dissimilar inclusions: 15 percent

Typical Profile

Polkton

Surface layer:
0 to 7 inches—reddish brown sandy clay loam

Subsoil:
7 to 18 inches—red clay that has brown mottles
18 to 24 inches—red clay that has brown and light gray mottles
24 to 36 inches—dark reddish brown clay loam

Bedrock:
36 to 52 inches—weathered Triassic siltstone
52 inches—unweathered Triassic siltstone

White Store

Surface layer:
0 to 5 inches—yellowish red clay loam

Subsoil:
5 to 20 inches—red clay
20 to 42 inches—red clay that has pinkish gray mottles
42 to 48 inches—red clay
48 to 52 inches—dark reddish brown clay loam

Bedrock:
52 to 60 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Polkton—moderately deep; White Store—deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: Moderate
Seasonal high water table: Polkton—at a depth of 1.5 to 2.5 feet from December through March; White Store—at a depth of 1.0 to 1.5 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Very severe
Parent material: Residuum weathered from Triassic siltstone, sandstone, shale, and mudstone
Depth to bedrock: Polkton—20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock; White Store—40 to 72 inches to soft bedrock and more than 72 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the well drained Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of less than 20 inches
• Random areas of the well drained Mayodan soils that have moderate permeability
• Random areas of the well drained Wadesboro soils that have a dark red subsoil and moderate permeability
• Creedmoor soils in the slightly lower-lying positions
• Iredell soils that have less acidity in the subsoil than the Polkton and White Store soils; on small knolls
• Gullies; commonly along old field rows

Similar inclusions:
• Random areas of soils that have a gravelly surface layer
• Random areas of well drained soils that have very slow permeability
• Soils that do not have an erosion hazard or have a slight erosion hazard; in low-lying depressional areas

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Applying large granules or banding of phosphorus helps to overcome phosphorus fixation.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.

• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Erodibility, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Performing logging operations only during periods when the soils are not wet helps to prevent rutting of the soil surface and possible root damage from compaction.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential and wetness
Management measures and considerations:
• Constructing dwellings on raised, well-compacted fill material helps to reduce the risk of damage from wetness.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Polkton—depth to bedrock, restricted permeability, and wetness; White Store—restricted permeability and wetness
Management measures and considerations:
• This map unit is severely limited for septic tank absorption fields. The Anson County Health Department should be contacted for additional guidance.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soils are not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Polkton soil and 9C in areas of the White Store soil

PwD3—Polkton-White Store complex, 15 to 25 percent slopes, severely eroded

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes and narrow ridges
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Polkton soil and similar inclusions: 60 percent
White Store soil and similar inclusions: 25 percent
Dissimilar inclusions: 15 percent

Typical Profile

Polkton

Surface layer:
0 to 7 inches—reddish brown sandy clay loam

Subsoil:
7 to 18 inches—red clay that has brown mottles
18 to 24 inches—red clay that has brown and light gray mottles
24 to 36 inches—dark reddish brown clay loam

Bedrock:
36 to 52 inches—weathered Triassic siltstone
52 inches—unweathered Triassic siltstone

White Store

Surface layer:
0 to 5 inches—yellowish red clay loam

Subsoil:
5 to 20 inches—red clay
20 to 42 inches—red clay that has pinkish gray mottles
42 to 48 inches—red clay
48 to 52 inches—dark reddish brown clay loam

Bedrock:
52 to 60 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Polkton—moderately deep; White Store—deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: Moderate
Seasonal high water table: Polkton—at a depth of 1.5 to 2.5 feet from December through March; White Store—at a depth of 1.0 to 1.5 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Moderately steep
Surface runoff: Very rapid
Hazard of water erosion: Very severe
Parent material: Residuum weathered from Triassic siltstone, sandstone, shale, and mudstone
Depth to bedrock: Polkton—20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock; White Store—40 to 72 inches to soft bedrock and more than 72 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the well drained Pinoka soils that have a loamy subsoil and have soft bedrock at a depth of less than 20 inches
• Random areas of the well drained Mayodan soils that have moderate permeability
• Creedmoor soils on toeslopes
• Random areas of Iredell soils that have less acidity in the subsoil than the Polkton and White Store soils
• Gullies; commonly along old field rows

Similar inclusions:
• Random areas of soils that have a gravelly surface layer
• Random areas of well drained soils that have very slow permeability
• Random areas of soils that do not have an erosion hazard or have a slight erosion hazard

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Unsuited
Commonly grown crops: None
Management concerns:
• This map unit has severe limitations affecting crop production. A site should be selected on better suited soils.

Pasture and hayland

Suitability: Poorly suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, root penetration, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope limits equipment use in the steeper areas.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Erodibility, equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Constructing roads, fire lanes, and skid trails on the contour helps to overcome the slope limitation.
• Performing logging operations only during periods when the soils are not wet helps to prevent rutting of the soil surface and possible root damage from compaction.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential, slope, and wetness
Management measures and considerations:
• Constructing dwellings on raised, well-compacted fill material helps to reduce the risk of damage from wetness.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Polkton—depth to bedrock, restricted permeability, slope, and wetness; White Store—restricted permeability, slope, and wetness
Management measures and considerations:
• This map unit is severely limited for septic tank absorption fields. The Anson County Health Department should be contacted for additional guidance.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soils are not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential, low strength, and slope
Management measures and considerations:
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8D in areas of the Polkton soil and 9C in areas of the White Store soil

RaA—Rains fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southeastern part of the county
Landform: Upland depressions and heads of drainageways
Landform position: Concave interfluves
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Rains soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—very dark gray fine sandy loam

Subsurface layer:
8 to 12 inches—gray sandy loam

Subsoil:
12 to 30 inches—light gray sandy clay loam that has brownish yellow mottles
30 to 54 inches—light gray sandy clay loam that has yellowish red mottles
54 to 62 inches—light gray sandy clay that has brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through April
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level

Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained Dothan and Emporia soils in the higher positions
• The moderately well drained Pelion soils in the slightly higher positions
• The very poorly drained Johnston soils in the lower-lying positions
• The somewhat poorly drained Chewacla soils on adjacent flood plains

Similar inclusions:
• Random areas of Rains soils that have a surface layer of loamy sand or sandy loam
• Somewhat poorly drained soils in the slightly higher positions
• Random areas of soils that have a sandy subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

This map unit may contain wetlands. The local office of the Natural Resources Conservation Service should be contacted for guidance.

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Wetness and soil fertility
Management measures and considerations:
• Installing a drainage system that includes open ditches, perforated tile, or land shaping helps to improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Wetness and soil fertility
Management measures and considerations:
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase productivity.
• Maintaining drainageways and ditches helps to remove excess water.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Equipment use, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occurs when the soil is saturated.
• Bedding the soil prior to planting helps to establish seedlings and increase their survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.
• Using site preparation practices, such as chopping, prescribed burning, and herbicide application, helps to reduce competition from unwanted plants.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• Building structures on the highest part of the landscape and using artificial drainage help to reduce the risk of damage from wetness.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIw
Woodland ordination symbol: 9W, based on loblolly pine as the indicator species

RmA—Riverview loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landscape: Piedmont, Upper Coastal Plain, and Triassic Basin
Landform: Flood plains
Landform position: Planar to slightly convex slopes
Shape of areas: Elongated or long and narrow
Size of areas: 5 to 100 acres

Composition

Riverview soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 10 inches—brown loam

Subsoil:
10 to 28 inches—strong brown loam that has reddish yellow mottles

Underlying material:
28 to 36 inches—brown fine sandy loam
36 to 45 inches—brown loamy fine sand that has strong brown mottles
45 to 62 inches—brown loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate or high
Seasonal high water table: At a depth of 3.0 to 5.0 feet from December through March
Hazard of flooding: Occasional from December through March for periods of 2 to 7 day
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Recent alluvial sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The somewhat poorly drained Chewacla soils in the slightly lower-lying positions, commonly farthest from the stream channel at the base of upland slopes
• The poorly drained Chastain soils that have a clayey subsoil; in the slightly lower-lying positions commonly farthest from the stream channel at the base of upland slopes
• The somewhat poorly drained Hornsboro soils in low-lying terrace positions
• The well drained McQueen soils that have a clayey subsoil; in the higher terrace positions
• The poorly drained Roanoke soils in low-lying terrace positions
• The moderately well drained Tetotum soils in low-lying terrace positions
• The well drained State soils in the higher terrace positions

Similar inclusions:
• Random areas of Shellbluff soils that have more silt in the subsoil than the Riverview soil
• Random areas of Riverview soils that have a surface layer of sandy loam or fine sandy loam

Land Use

Dominant Uses: Cropland
Other Uses: Pasture, hayland, and woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Occasional flooding
Management measures and considerations:
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.

• This map unit is difficult to manage for cropland because of the potential for flooding during the growing season.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Occasional flooding
Management measures and considerations:
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Flooding may pose a hazard to livestock.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Harvesting timber during summer helps to reduce the risk of damage from flooding.

Urban Development

Dwellings

Suitability: Unsuited
Management concerns:
• The occasional flooding is a severe limitation affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The occasional flooding is a severe limitation affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.

Local roads and streets

Suitability: Unsuited
Management concerns:
• The occasional flooding is a severe limitation affecting roads and streets. A site should be selected on better suited soils.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 12A, based on loblolly pine as the indicator species

RoA—Roanoke loam, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Piedmont, Triassic Basin, and Upper Coastal Plain; mainly along the Pee Dee River
Landform: Low stream terraces
Landform position: Planar to slightly concave slopes
Shape of areas: Oblong or irregular
Size of areas: 4 to 75 acres

Composition

Roanoke soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

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

Subsoil:
7 to 20 inches—light brownish gray silty clay
20 to 30 inches—light gray silty clay that has yellowish brown and yellowish red mottles
30 to 43 inches—gray silty clay loam that has brownish yellow mottles
43 to 52 inches—gray clay that has yellowish red mottles

Underlying material:
52 to 60 inches—gray gravelly sandy clay loam that has brownish and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very slow or slow
Available water capacity: Moderate
Seasonal high water table: Within a depth of 1.0 foot from November through May
Hazard of flooding: Rare
Shrink-swell potential: Moderate
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Clayey alluvial sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The somewhat poorly drained Chewacla soils that

have a loamy subsoil; on the outer edge of map units on flood plains
• Random areas of somewhat poorly drained Hornsboro soils
• The moderately well drained Tetotum soils that have a loamy subsoil; in the slightly higher positions
• The well drained McQueen soils in the slightly higher positions and on small knolls

Similar inclusions:
• Chastain soils on the outer edge of map units in flood plains
• Random areas of soils that have a surface layer of silt loam, fine sandy loam, or silty clay loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and cropland

This map unit may contain wetlands. The local office of the Natural Resources Conservation Service should be contacted for guidance.

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, soybeans, and small grain
Management concerns: Flooding and wetness
Management measures and considerations:
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Installing a drainage system that includes open ditches, perforated tile, or land shaping helps to improve soil productivity.

Pasture and hayland

Suitability: Poorly suited
Commonly grown crops: Tall fescue, legumes, and clover
Management concerns: Flooding and wetness
Management measures and considerations:
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Flooding may pose a hazard to livestock.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.

Woodland

Suitability: Suited
Productivity class: Moderately high for sweetgum
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.
• Using low-pressure ground equipment helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.
• Maintaining drainageways and planting trees that are tolerant of wetness help to increase seedling survival rates.
• Bedding the soil prior to planting helps to establish seedlings and increase their survival rates.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Wetness and flooding
Management measures and considerations:
• Building structures on the highest part of the landscape helps to reduce the risk of damage from wetness and flooding.
• Constructing dwellings on elevated, well-compacted fill material helps to minimize damage from floodwaters.
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Unsuited
Management concerns:
• The wetness and restricted permeability are severe limitations affecting septic tank absorption fields.
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Accessing public sewage system outlets eliminates the need to use this severely limited soil for septic tank systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and wetness
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Designing roads so that they safely remove surface runoff helps to improve soil performance.

Figure 6.—An area of Rock outcrop-Wake complex, 2 to 8 percent slopes.

• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVw
Woodland ordination symbol: 7W, based on sweetgum as the indicator species

RwB—Rock outcrop-Wake complex, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the southern part of the county
Landform: Ridges and hillslopes (fig. 6)
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 25 acres

Composition

Rock outcrop: 60 percent
Wake soil and similar inclusions: 25 percent
Dissimilar inclusions: 15 percent

Typical Profile

Rock outcrop

Surface layer:
Unweathered, hard granite

Wake

Surface layer:
0 to 10 inches—brown gravelly loamy sand

Underlying material:
10 to 18 inches—yellowish brown gravelly loamy sand

Bedrock:
18 inches—unweathered granite

Soil Properties and Qualities

Depth class: Rock outcrop—very shallow; Wake—shallow
Drainage class: Rock outcrop—not applicable; Wake—excessively drained
Permeability: Rock outcrop—not applicable; Wake—rapid
Available water capacity: Rock outcrop—not applicable; Wake—very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium or rapid
Hazard of water erosion: None or slight
Parent material: Rock outcrop—not applicable; Wake—residuum weathered from felsic high-grade metamorphic or igneous rock
Depth to bedrock: Rock outcrop—0 inches; Wake—11 to 20 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Cecil and Pacolet soils that have a clayey subsoil and have bedrock at a depth of more than 60 inches; along the edge of the map unit
• Random areas of soils that have hard bedrock at a depth of 20 to 40 inches
• Random areas of moderately well drained soils

Similar inclusions:
• Random areas of soils that have a surface layer of fine sandy loam or loam
• Random areas of soils that have a subsoil of fine sandy loam or loam

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Rock outcrop—unsuited; Wake—poorly suited
Commonly grown crops: None
Management concerns: Droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• This map unit is difficult to manage for cropland because of the areas of Rock outcrop.
• This map unit is difficult to manage for economical crop production because of the shallow rooting depth of the Wake soil.
• Leaving crop residue on the soil surface helps to conserve soil moisture.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Rock outcrop—unsuited; Wake—suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Droughtiness, rooting depth, and soil fertility
Management measures and considerations:
• This map unit is difficult to manage for pasture and hayland because of the areas of Rock outcrop.
• Selecting drought-tolerant species helps to increase productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Rock outcrop—unsuited; Wake—poorly suited
Productivity class: Very low for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Periodically harvesting windthrown trees helps to improve soil productivity.

Urban Development

Dwellings

Suitability: Rock outcrop—unsuited; Wake—poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The depth to bedrock is a severe limitation affecting dwellings. A site should be selected on better suited soils.
• Drilling and blasting of rock or special earthmoving equipment is needed because of the limited depth of the soil.

• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Rock outcrop—unsuited; Wake—poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• This map unit is severely limited for septic tank absorption fields because of the depth to bedrock. The Anson County Health Department should be contacted for additional guidance.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Depth to bedrock
Management measures and considerations:
• The depth to bedrock is a severe limitation affecting roads and streets. A site should be selected on better suited soils.
• Extensive blasting, land shaping, and grading are needed if roads are constructed on the contour.

Interpretive Groups

Land capability classification: Rock outcrop—none assigned; Wake—IVs
Woodland ordination symbol: Rock outcrop—none assigned; Wake—6D, based on loblolly pine as the indicator species

ShA—Shellbluff loam, 0 to 2 percent slopes, occasionally flooded

Setting

Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly convex slopes
Shape of areas: Long and narrow or oblong
Size of areas: 10 to 500 acres

Composition

Shellbluff soil and similar inclusions: 80 to 85 percent
Dissimilar inclusions: 15 to 20 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 30 inches—strong brown silty clay loam
30 to 45 inches—brown silty clay loam

Underlying material:
45 to 60 inches—brown silty clay loam that has light yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Seasonal high water table: At a depth of 3.0 to 5.0 feet from December through March
Hazard of flooding: Occasional for brief periods from December through March
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Recent alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The somewhat poorly drained Chewacla soils in low-lying depressional areas on adjacent flood plains
• The somewhat poorly drained Hornsboro soils that have a clayey subsoil; in the low-lying depressional areas
• Excessively drained, sandy soils adjacent to the deeper stream channels
• The well drained McQueen soils that have a clayey subsoil; in the higher positions

Similar inclusions:
• Random areas of Shellbluff soils that have a surface layer of silt loam or fine sandy loam
• Random areas of Riverview soils that have less silt in the subsoil than the Shellbluff soil
• The moderately well drained Tetotum soils in the slightly lower-lying positions

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Flooding and soil fertility

Management measures and considerations:
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Performing tillage and harvesting when the soil is not wet helps to prevent clodding and rutting by equipment.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, bermudagrass, orchardgrass, legumes, and clover
Management concerns: Flooding and soil fertility
Management measures and considerations:
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• The occasional flooding may pose a hazard to livestock.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• This map unit has slight limitations affecting woodland management.
Management measures and considerations:
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
• The occasional flooding is a severe limitation affecting dwellings. A site should be selected on better suited soils.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
• This map unit is severely limited for septic tank absorption fields because of the occasional flooding and wetness. The Anson County Health Department should be contacted for additional guidance.

Local roads and streets

Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
• Bridges should be constructed or culverts used to cross streams and flood plains.
• Constructing roads on raised, well-compacted fill material helps to overcome the flooding limitation.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 12A, based on loblolly pine as the indicator species

StA—State fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Piedmont and Upper Coastal Plain; throughout the county along major streams
Landform: Low stream terraces
Landform position: Planar to slightly convex slopes
Shape of areas: Elongated
Size of areas: 5 to 75 acres

Composition

State soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 11 inches—dark yellowish brown fine sandy loam

Subsoil:
11 to 16 inches—strong brown fine sandy loam that has brown mottles
16 to 22 inches—yellowish brown clay loam that has dark yellowish brown mottles
22 to 40 inches—yellowish brown clay loam that has strong brown and light yellowish brown mottles
40 to 55 inches—yellowish brown fine sandy loam

Underlying material:
55 to 68 inches—yellowish brown fine sandy loam that has light brownish gray mottles

Figure 7.—Flooding in an area of State and Tetotum soils. These soils are rated as rarely flooded.

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Seasonal high water table: At a depth of 4.0 to 6.0 feet from December through June
Hazard of flooding: Rare (fig. 7)
Shrink-swell potential: Low
Slope class: Nearly level
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Recent alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- The moderately well drained Tetotum soils in the slightly lower-lying positions
- The somewhat poorly drained Chewacla soils in the slightly lower-lying positions on adjacent flood plains
- McQueen soils that have a clayey subsoil; in the slightly higher positions
- Hiwassee soils that have a dark red clayey subsoil; in the slightly higher positions
- Riverview and Shellbluff soils which have less clay in the subsoil than the State soil; in the slightly lower-lying positions on adjacent flood plains

Similar inclusions:
- Random areas of soils that have less clay in the subsoil than the State soil
- Random areas of State soils that have a surface layer of sandy loam or loamy sand
- Random areas of soils that have a red subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Flooding and soil fertility
Management measures and considerations:
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, alfalfa, legumes, and clover
Management concerns: Flooding and soil fertility
Management measures and considerations:
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns:
• There are no significant limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Flooding
Management measures and considerations:
• Building structures on the highest part of the landscape helps to reduce the risk of damage from flooding.
• Constructing dwellings on elevated, well-compacted fill material helps to minimize damage from floodwaters.

Septic tank absorption fields

Suitability: Suited
Management concerns: Flooding, wetness, and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Using suitable fill material to raise the filter field a sufficient distance above potential flood waters helps to improve the performance of septic systems.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and flooding
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Using well-compacted fill material as a road base can help to elevate roads above the level of flooding.

Interpretive Groups

Land capability classification: I
Woodland ordination symbol: 10A, based on loblolly pine as the indicator species

TaB—Tarrus gravelly silt loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont uplands; mainly in the southern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 250 acres

Composition

Tarrus soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—strong brown gravelly silt loam that has yellowish red mottles

Subsoil:
5 to 10 inches—red silty clay
10 to 24 inches—red clay
24 to 32 inches—red silty clay that has reddish yellow and reddish brown mottles
32 to 40 inches—red silty clay loam that has reddish yellow and reddish brown mottles

Underlying material:
40 to 54 inches—mottled weak red, brownish yellow, and light gray silt loam saprolite

Bedrock:
54 to 60 inches—weathered fractured slate

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Badin soils that have soft bedrock at a depth of less than 40 inches; on small knolls and the outer edge of map units
• Random areas of Georgeville soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of Nanford soils that have a reddish yellow subsoil
• Random areas of Tarrus soils that have a surface layer of fine sandy loam, sandy loam, loam, silty clay loam, or silty clay

Land Use

Dominant Uses: Cropland
Other Uses: Woodland and pasture

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, soil blowing, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, bermudagrass, alfalfa, clover, and legumes
Management concerns: Erodibility, soil blowing, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
• This map unit has few limitations affecting woodland management.
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-

textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8A, based on loblolly pine as the indicator species

TgC—Tarrus-Georgeville complex, 8 to 15 percent slopes

Setting

Landscape: Piedmont uplands; in the southern part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 200 acres

Composition

Tarrus soil and similar inclusions: 55 percent
Georgeville soil and similar inclusions: 30 percent
Dissimilar inclusions: 15 percent

Typical Profile

Tarrus

Surface layer:
0 to 5 inches—strong brown gravelly silt loam that has yellowish red mottles

Subsoil:
5 to 10 inches—red silty clay
10 to 24 inches—red clay
24 to 32 inches—red silty clay that has reddish yellow and reddish brown mottles
32 to 40 inches—red silty clay loam that has reddish yellow and reddish brown mottles

Underlying material:
40 to 54 inches—mottled weak red, brownish yellow, and light gray silt loam saprolite

Bedrock:
54 to 60 inches—weathered fractured slate

Georgeville

Surface layer:
0 to 4 inches—yellowish brown gravelly silt loam

Subsurface layer:
4 to 12 inches—brownish yellow gravelly silt loam

Subsoil:
12 to 48 inches—red clay
48 to 55 inches—red silty clay loam

Underlying material:
55 to 60 inches—mottled red, dark red, and yellow loam saprolite

Soil Properties and Qualities

Depth class: Tarrus—deep; Georgeville—very deep
Drainage class: Well drained
Permeability: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Depth to bedrock: Tarrus—40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock; Georgeville—more than 60 inches to bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Badin soils that have soft bedrock at a depth of less than 40 inches

Similar inclusions:
• Random areas of eroded Tarrus and Georgeville soils that have a surface layer of channery silty clay loam or clay loam

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Management concerns: Erodibility, tilth, and soil fertility
Management measures and considerations:
- Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
- Performing tillage only during periods when the soils are not wet and incorporating crop residue into the soil or leaving residue on the soil surface help to minimize clodding and crusting and maximize the infiltration of water.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Management concerns: Erodibility and soil fertility
Management measures and considerations:
- Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
- Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
- Using rotational grazing and implementing a well-planned clipping and harvesting schedule helps to maintain pasture and increase forage production.
- Incorporating plant residue into the soil helps to improve the water-holding capacity.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns:
- This map unit has few limitations affecting woodland management.

Management measures and considerations:
- Planting improved varieties of loblolly pine helps to increase productivity.
- Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Tarrus—shrink-swell potential and slope; Georgeville—slope
Management measures and considerations:
- Reinforcing foundations and basements or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
- Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
- Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Tarrus—depth to bedrock, restricted permeability, and slope; Georgeville—restricted permeability and slope
Management measures and considerations:
- The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
- Increasing the size of the septic tank absorption field helps to improve its performance.
- Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.
- Installing septic system distribution lines only during periods when the soils are not wet helps to prevent smearing and sealing of trench walls.

Local roads and streets

Suitability: Tarrus—poorly suited; Georgeville—suited
Management concerns: Low strength and slope
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
- Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
- Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soils and prevent excessive erosion.

Interpretive Groups

Land capability classification: Tarrus—IIIe; Georgeville—IVe
Woodland ordination symbol: Based on loblolly pine as the indicator species, 8A in areas of the Tarrus soil and 9A in areas of the Georgeville soil

ToA—Tetotum silt loam, 0 to 3 percent slopes, rarely flooded

Setting

Landscape: Piedmont, Upper Coastal Plain, Sandhills, and Triassic Basin; along major streams
Landform: Low stream terraces
Landform position: Planar to slightly convex slopes
Shape of areas: Elongated
Size of areas: 5 to 150 acres

Composition

Tetotum soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 5 inches—yellowish brown silt loam

Subsoil:
5 to 21 inches—yellowish brown clay loam
21 to 28 inches—yellowish brown silty clay loam that has dark yellowish brown and strong brown mottles
28 to 36 inches—brownish yellow clay loam that has light gray mottles
36 to 48 inches—brownish yellow silty clay loam that has light gray mottles

Underlying material:
48 to 60 inches—mottled light gray and brownish yellow loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Available water capacity: High or very high
Seasonal high water table: At a depth of 1.5 to 2.5 feet from December through April
Hazard of flooding: Rare
Shrink-swell potential: Low
Slope class: Nearly level or gently sloping
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Recent alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained State soils in the slightly higher positions
• The well drained McQueen soils that have a red clayey subsoil and slow permeability; in the slightly higher positions
• The well drained Hiwassee soils that have a dark red clayey subsoil; in the slightly higher positions
• The well drained Riverview and Shellbluff soils in the slightly lower-lying positions on adjacent flood plains
• The somewhat poorly drained Hornsboro and poorly drained Roanoke soils in the slightly lower-lying positions

Similar inclusions:
• Random areas of soils that have less silt in the subsoil than the Tetotum soil
• Random areas of Tetotum soils that have a surface layer of sandy loam or loamy sand
• Random areas of soils that have a red subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Flooding, wetness, and soil fertility
Management measures and considerations:
• Harvesting row crops as soon as possible helps to reduce the risk of damage from possible flooding.
• Installing an artificial drainage system helps to reduce the wetness limitation and improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, alfalfa, legumes, and clover
Management concerns: Flooding, wetness, and soil fertility

Management measures and considerations:
• Harvesting hay crops as soon as possible helps to reduce the risk of damage from flooding.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Equipment use
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations during periods when the soil is not saturated helps to prevent rutting of the soil surface and damage to tree roots due to soil compaction.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Flooding and wetness
Management measures and considerations:
• Building structures on the highest part of the landscape helps to reduce the risk of damage from flooding or wetness.
• Constructing dwellings on elevated, well-compacted fill material helps to minimize damage from floodwaters.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.

Local roads and streets

Suitability: Suited
Management concerns: Low strength and wetness
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.

Interpretive Groups

Land capability classification: IIw
Woodland ordination symbol: 9A, based on loblolly pine as the indicator species

UdC—Udorthents, loamy, 0 to 15 percent slopes

Setting

Landscape: Piedmont uplands; throughout the county
Landform: Areas where natural soil has been excavated or covered by earthy fill material
Landform position: Variable; commonly on convex interfluves and side slopes
Shape of areas: Rectangular or irregular
Size of areas: 4 to 190 acres

Composition

Udorthents and similar inclusions: 90 percent
Dissimilar inclusions: 10 percent

Udorthents consists of miscellaneous areas where natural soils have been altered by cutting, filling, and shaping. The surface layer is loamy material that is variable in composition, depth, slope, and ability to grow plants. Borrow areas, cut and fill areas, reclaimed land where gravel has been removed, and sanitary landfills comprise most of this map unit.

Borrow areas are areas where all the original soil material has been excavated for use as construction material. The cuts are as much as 25 feet deep. The sides of excavations are very steep to nearly vertical. The more recent excavated areas are bare and subject to accelerated erosion. The older areas are eroded, but many have stabilized under pine or other vegetation.

Cut and fill areas are areas where soil material has been removed and placed in an adjacent area. Most of these areas are in school yards with athletic fields, major highway interchanges, and industrial sites. These areas are subject to accelerated erosion.

Reclaimed land consists of areas where gravel has been removed, the remaining soil replaced, and the land contoured. Many areas have been stabilized and seeded to grass or planted in loblolly pine.

Sanitary landfills are excavated areas where deeply graded trenches, as much as 30 feet deep, have been backfilled with alternating layers of solid refuse and soil material. Most areas are seeded to grass or trees after the final cover is added.

Typical Profile

(For an area of a reclaimed gravel pit)

Surface layer:
0 to 20 inches—mottled yellowish red, reddish yellow, and light gray sandy loam

Underlying material:
20 to 40 inches—mottled yellowish red, strong brown, and white gravelly sandy loam
40 to 60 inches—mottled yellowish red, reddish yellow, and light gray sandy loam

Soil Properties and Qualities

Depth class: Shallow to very deep
Drainage class: Well drained or moderately well drained
Permeability: Moderate to very slow
Depth to seasonal high water table: Variable; commonly more than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level to strongly sloping
Surface runoff: Medium to very rapid
Hazard of water erosion: Moderate or severe
Soil reaction: Very strongly acid to neutral
Parent material: Not applicable
Depth to bedrock: Variable; commonly more than 40 inches

Minor Components

Dissimilar inclusions:
• Areas of undisturbed soils on the outer edge of map units
• Random areas of Udorthents that have bedrock at a depth of less than 40 inches
• Poorly drained soils in depressions

Similar inclusions:
• Soils that are similar to Udorthents but have clayey or sandy underlying material

Land Use

Dominant Uses: Wildlife areas
Other Uses: Urban and recreational development

Recommendations for reclamation and use of this map unit require onsite examination.

Agricultural Development

Cropland

Suitability: Poorly suited
Management concerns: Highly disturbed soils and limited size of areas
Management measures and considerations:
• This map unit is difficult to manage for crop production because of highly variable soil properties.

Pasture and hayland

Suitability: Unsuited
Management concerns: Highly disturbed soils and limited size of areas
Management measures and considerations:
• This map unit is difficult to manage for the production of pasture and hay crops because of highly variable soil properties.

Woodland

Suitability: Poorly suited
Productivity class: Moderate for loblolly pine
Management concerns: Highly disturbed soils and limited size of areas
Management measures and considerations:
• This map unit is difficult to manage for timber production because of the limited size of the areas, intermittent areas of Urban land, and areas of highly disturbed soils.
• Planting the appropriate species, as recommended by a forester, helps to achieve maximum productivity and ensure planting success.

Urban Development

Suitability: Poorly suited
Management concerns: Depth to bedrock, differential settling, highly disturbed soils, and wetness
Management measures and considerations:
• This map unit has severe limitations affecting urban development because of highly variable soil properties. A site should be selected on better suited soils.

Recreational Development

Suitability: Poorly suited
Management concerns: Depth to bedrock, differential settling, highly disturbed soils, and wetness
Management measures and considerations:
• This map unit has severe limitations affecting recreational development because of highly variable

soil properties. A site should be selected on better suited soils.

Interpretive Groups

Land capability classification: VIIs
Woodland ordination symbol: None assigned

VaB—Vaucluse loamy sand, 2 to 8 percent slopes

Setting

Landscape: Sandhills and Upper Coastal Plain; mainly in the southeastern part of the county
Landform: Ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 50 acres

Composition

Vaucluse soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsurface layer:
7 to 14 inches—pale brown loamy sand

Subsoil:
14 to 18 inches—yellowish brown sandy loam
18 to 29 inches—yellowish brown sandy clay loam
29 to 37 inches—yellowish brown sandy clay loam that has yellowish red and very pale brown mottles
37 to 50 inches—mottled yellowish red, yellowish brown, and light yellowish brown sandy clay loam

Underlying material:
50 to 60 inches—mottled yellowish red and yellowish brown sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
- Ailey and Fuquay soils that have sandy surface layers more than 20 inches thick; in landform positions similar to those of the Vaucluse soil
- Dothan soils that have more than 5 percent plinthite in the subsoil; on broad flat ridges
- Random areas of Emporia soils that have moderate permeability in the subsoil
- The moderately well drained Pelion soils in low-lying depressional areas
- Tarrus, Nanford, and Badin soils that have a clayey subsoil and have bedrock at a depth of less than 60 inches; on the outer edge of map units

Similar inclusions:
- Random areas of Vaucluse soils that have a surface layer of gravelly loamy sand or gravelly sandy loam
- Random areas of soils that have moderately slow permeability in the subsoil

Land Use

Dominant Uses: Cropland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, cotton, and small grain
Management concerns: Soil blowing, droughtiness, and soil fertility
Management measures and considerations:
- Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
- Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Bermudagrass, orchardgrass, legumes, and clover
Management concerns: Soil blowing, droughtiness, and soil fertility
Management measures and considerations:
- Preventing overgrazing or preventing grazing when

the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Planting seedlings during wet, cool periods helps to increase plant survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth of the soil.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• This map unit has few limitations affecting dwellings.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Local roads and streets

Suitability: Well suited
Management concerns:
• This map unit has few limitations affecting roads and streets.
Management measures and considerations:
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIs
Woodland ordination symbol: 7A, based on loblolly pine as the indicator species

VgC—Vaucluse very gravelly loamy sand, 8 to 15 percent slopes

Setting

Landscape: Sandhills and Upper Coastal Plain; mainly in the southeastern part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 5 to 50 acres

Composition

Vaucluse soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsurface layer:
5 to 10 inches—pale brown very gravelly sand

Subsoil:
10 to 18 inches—yellowish red sandy clay loam
18 to 27 inches—red sandy clay loam
27 to 39 inches—strong brown sandy clay loam that has red mottles

Underlying material:
39 to 60 inches—yellowish red sandy loam that has pink mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Ailey soils that have sandy surface layers more than 20 inches thick; in landform positions similar to those of the Vaucluse soil
• Random areas of Emporia soils that have moderate permeability in the subsoil
• Random areas of Pacolet soils that have a clayey subsoil and moderate permeability
• Nanford and Badin soils that have a clayey subsoil and have bedrock at a depth of less than 60 inches; on the outer edge of map units

Similar inclusions:
• Random areas of Vaucluse soils that have a surface layer of loamy sand or sandy loam
• Random areas of soils that have moderately slow permeability in the subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Tobacco, corn, small grain, cotton, and soybeans
Management concerns: Erodibility, soil blowing, droughtiness, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Bermudagrass, orchardgrass, legumes, and clover
Management concerns: Erodibility, soil blowing, droughtiness, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Planting high-quality seedlings in a shallow furrow helps to increase plant survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.

Local roads and streets

Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 7A, based on loblolly pine as the indicator species

VgD—Vaucluse very gravelly loamy sand, 15 to 25 percent slopes

Setting

Landscape: Sandhills and Upper Coastal Plain; mainly in the southeastern part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 10 to 100 acres

Composition

Vaucluse soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsurface layer:
5 to 10 inches—pale brown very gravelly sand

Subsoil:
10 to 18 inches—yellowish red sandy clay loam
18 to 27 inches—red sandy clay loam
27 to 39 inches—strong brown sandy clay loam that has red mottles

Underlying material:
39 to 60 inches—yellowish red sandy loam that has pink mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Moderately steep
Surface runoff: Very rapid
Hazard of water erosion: Severe
Parent material: Loamy marine sediments
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• Random areas of Pacolet soils that have a clayey subsoil and moderate permeability
• Badin soils that have a clayey subsoil and have bedrock at a depth of less than 60 inches; on the outer edge of map units

Similar inclusions:
• Random areas of Vaucluse soils that have a surface layer of loamy sand or sandy loam
• Random areas of soils that have moderately slow permeability in the subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: None
Management concerns:
• This map unit has severe limitations affecting crop production. A site should be selected on better suited soils.

Pasture and hayland

Suitability for pasture: Suited
Suitability for hayland: Poorly suited
Commonly grown crops: Bermudagrass, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, droughtiness, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
• The slope limits equipment use in the steeper areas.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and

maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, seedling survival, and windthrow hazard
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Establishing permanent plant cover on roads and landings following logging operations helps to minimize erosion and siltation of streams.
• Planting high-quality seedlings in a shallow furrow helps to increase plant survival rates.
• Productivity may be increased by the periodic harvesting of windthrown trees caused by high winds and the limited rooting depth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads on the contour and providing adequate water-control structures, such as culverts, help to maintain road stability.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 7A, based on loblolly pine as the indicator species

W—Water

This map unit consists of areas of water, including lakes and rivers. This unit occurs in areas throughout the county. Two of the largest water areas in the survey area are the Pee Dee and Rocky Rivers.

This map unit is not assigned a land capability class or a woodland ordination symbol.

WaB2—Wadesboro clay loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes and ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 15 to 100 acres

Composition

Wadesboro soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—dark reddish brown clay loam

Subsoil:
8 to 20 inches—dark red clay
20 to 30 inches—dark reddish brown clay

Underlying material:
30 to 41 inches—dark reddish brown loam saprolite

Bedrock:
41 to 60 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None

Shrink-swell potential: Moderate
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Severe
Parent material: Residuum weathered from Triassic siltstone, shale, mudstone, sandstone, or conglomerate
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the moderately well drained Polkton soils that have soft bedrock at a depth of less than 40 inches and have very slow permeability in the subsoil
• Random areas of the moderately well drained White Store soils that have very slow permeability in the subsoil
• Random areas of Pinoka soils that have hard bedrock at a depth of less than 40 inches and have less clay in the subsoil than the Wadesboro soil
• Random areas of Mayodan soils that have soft bedrock at a depth of more than 60 inches
• Random areas of the somewhat poorly drained Creedmoor soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of soils that have a yellowish red and red subsoil
• Random areas of Wadesboro soils that have a surface layer of silt loam or loam
• Random areas of soils that have slow permeability in the subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Well suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for shortleaf pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential and erodibility
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock and restricted permeability

Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Increasing the size of the septic tank absorption field helps to improve its performance.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and erodibility
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIe
Woodland ordination symbol: 8C, based on loblolly pine as the indicator species

WaC2—Wadesboro clay loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Triassic Basin; mainly in the central part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Irregular
Size of areas: 10 to 60 acres

Composition

Wadesboro soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—dark reddish brown clay loam

Subsoil:
8 to 20 inches—dark red clay
20 to 30 inches—dark reddish brown clay

Underlying material:
30 to 41 inches—dark reddish brown loam saprolite

Bedrock:
41 to 60 inches—weathered Triassic siltstone

Soil Properties and Qualities

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Strongly sloping
Surface runoff: Rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from Triassic siltstone, shale, mudstone, sandstone, or conglomerate
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of the moderately well drained Polkton soils that have soft bedrock at a depth of less than 40 inches and have very slow permeability in the subsoil
• Random areas of the moderately well drained White Store soils that have very slow permeability in the subsoil
• Random areas of Pinoka soils that have hard bedrock at a depth of less than 40 inches and have less clay in the subsoil than the Wadesboro soil
• Random areas of Mayodan soils that have soft bedrock at a depth of more than 60 inches
• Random areas of the somewhat poorly drained Creedmoor soils that have soft bedrock at a depth of more than 60 inches

Similar inclusions:
• Random areas of soils that have a yellowish red and red subsoil
• Random areas of Wadesboro soils that have a surface layer of silt loam or loam
• Random areas of soils that have slow permeability in the subsoil

Land Use

Dominant Uses: Woodland
Other Uses: Pasture and hayland

Agricultural Development

Cropland

Suitability: Suited

Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, equipment use, and soil fertility
Management measures and considerations:
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for shortleaf pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Suited
Management concerns: Shrink-swell potential, slope, and erodibility
Management measures and considerations:
• Reinforcing foundations or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Designing structures so that they conform to the natural slope or building in the less sloping areas helps to improve soil performance.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Suited
Management concerns: Depth to bedrock, slope, and restricted permeability
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Installing distribution lines on the contour helps to improve the performance of septic tank absorption fields.
• Increasing the size of the septic tank absorption field helps to improve its performance.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and erodibility
Management measures and considerations:
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 8C, based on loblolly pine as the indicator species

WcB—Wakulla sand, 1 to 8 percent slopes

Setting

Landscape: Upper Coastal Plain and Sandhills; mainly in the southern part of the county

Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 20 to 250 acres

Composition

Wakulla soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—dark grayish brown sand

Subsurface layer:
8 to 24 inches—light yellowish brown sand

Subsoil:
24 to 38 inches—yellowish brown loamy sand

Underlying material:
38 to 54 inches—brownish yellow sand
54 to 86 inches—very pale brown sand

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Available water capacity: Very low
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: Low
Slope class: Nearly level or gently sloping
Surface runoff: Rapid
Hazard of water erosion: Moderate
Parent material: Sandy marine sediments
Depth to bedrock: More than 80 inches

Minor Components

Dissimilar inclusions:
- The well drained Dothan and Fuquay soils that have a loamy subsoil and more than 5 percent plinthite in the subsoil; on broad ridges
- The well drained Ailey and Candor soils which have a loamy subsoil; in landform positions similar to those of the Wakulla soil
- Random areas of the well drained Emporia soils that have moderate permeability in the subsoil
- Soils that have a seasonal high water table at a depth of less than 6.0 feet; in low-lying depressional areas

Similar inclusions:
- Random areas of excessively drained soils
- Random areas of soils that have a surface layer of loamy sand

Land Use

Dominant Uses: Pasture and hayland
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Tobacco, corn, small grain, cotton, and soybeans
Management concerns: Soil blowing, droughtiness, nutrient leaching, and soil fertility
Management measures and considerations:
- Leaving the maximum amount of crop residue on the soil surface helps to control soil blowing and conserve soil moisture.
- Using conservation tillage, winter cover crops, crop residue management, and crop rotations which include grasses and legumes helps to increase the available water capacity and improve soil fertility.
- Using frequent and light applications of irrigation water helps to prevent the leaching of plant nutrients and pesticides below the plant roots.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Bermudagrass and native bluegrass
Management concerns: Soil blowing, droughtiness, nutrient leaching, and soil fertility
Management measures and considerations:
- Preventing overgrazing or preventing grazing when the soil is too wet helps to maintain a protective plant cover and thus minimize soil blowing.
- Providing supplemental irrigation and selecting crop varieties adapted to droughty conditions help to increase crop production.
- Using split applications of fertilizer and herbicides helps to increase their effectiveness.
- Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine

Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Using tracked or low-pressure ground equipment helps to prevent rutting and root compaction during harvesting.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting dwellings.

Septic tank absorption fields

Suitability: Suited
Management concerns: Poor filtering capacity
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Building up or mounding the septic system site with suitable fill material helps to increase the filtering capacity of the absorption field.
• Measures that improve filtering capacity should be considered; the soil readily absorbs but does not adequately filter effluent.

Local roads and streets

Suitability: Well suited
Management concerns:
• There are no significant limitations affecting roads and streets.

Interpretive Groups

Land capability classification: IIIs
Woodland ordination symbol: 6S, based on longleaf pine as the indicator species

WhB2—White Store fine sandy loam, 2 to 8 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the south-central part of the county
Landform: Ridges and hillslopes
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 10 to 320 acres

Composition

White Store soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsoil:
6 to 15 inches—yellowish red clay
15 to 32 inches—yellowish red clay
32 to 42 inches—yellowish red clay that has light gray mottles
42 to 50 inches—dark red clay loam that has light gray mottles

Bedrock:
50 to 60 inches—weathered Triassic mudstone

Soil Properties and Qualities

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: Moderate
Seasonal high water table: At a depth of 1.0 to 2.0 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: 40 to more than 60 inches to soft bedrock and more than 72 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Polkton soils that have soft bedrock at a depth of less than 40 inches
• Random areas of the well drained Mayodan soils that have moderate permeability in the subsoil
• Random areas of Creedmoor soils that have less clay in the upper part of the subsoil than the White Store soil; in the slightly lower positions
• Random areas of Iredell soils that have less acidity in the subsoil than the White Store soil; on small knolls
• The well drained Wadesboro soils that have a red or dark red subsoil and moderate permeability; on small knolls

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of well drained soils that have very slow permeability in the subsoil
• Random areas of soils that have slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Unsurfaced roads may be impassible during wet periods because of the high clay content of the soil.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential and wetness
Management measures and considerations:
• Installing a subsurface drainage system helps to intercept water from seeps and springs.
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength

Management measures and considerations:
• Constructing roads on well-compacted fill material helps to overcome the shrink-swell limitation.
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 9C, based on loblolly pine as the indicator species

WhC2—White Store fine sandy loam, 8 to 15 percent slopes, moderately eroded

Setting

Landscape: Piedmont; mainly in the central part of the county
Landform: Hillslopes
Landform position: Convex side slopes
Shape of areas: Elongated
Size of areas: 10 to 100 acres

Composition

White Store soil and similar inclusions: 80 percent
Dissimilar inclusions: 20 percent

Typical Profile

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

Subsoil:
6 to 15 inches—yellowish red clay
15 to 32 inches—yellowish red clay
32 to 42 inches—yellowish red clay that has light gray mottles
42 to 50 inches—dark red clay loam that has light gray mottles

Bedrock:
50 to 60 inches—weathered Triassic mudstone, siltstone, and shale

Soil Properties and Qualities

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Very slow
Available water capacity: Moderate
Seasonal high water table: At a depth of 1.0 to 2.0 feet from December through March
Hazard of flooding: None
Shrink-swell potential: Very high
Slope class: Strongly sloping
Surface runoff: Very rapid
Hazard of water erosion: Severe
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale of the Triassic Basin
Depth to bedrock: 40 to more than 60 inches to soft bedrock and more than 72 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Polkton soils that have soft bedrock at a depth of less than 40 inches
• Random areas of the well drained Mayodan soils that have moderate permeability in the subsoil
• The well drained Wadesboro soils that have a red or dark red subsoil and moderate permeability; on the upper part of the slope
• Random areas of Creedmoor soils that have less clay in the upper part of the subsoil than the White Store soil; in the slightly lower-lying positions
• Random areas of Iredell soils that have less acidity in the subsoil than the White Store soil; on small knolls

Similar inclusions:
• Random areas of soils that have a surface layer of gravelly fine sandy loam, silt loam, sandy clay loam, or clay loam
• Random areas of well drained soils that have very slow permeability in the subsoil
• Random areas of soils that have slow permeability

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, soybeans, small grain, and cotton
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Resource management systems that include conservation tillage, crop residue management, stripcropping, and sod-based rotations help to minimize erosion, control surface runoff, and maximize the infiltration of water.
• Including perennial grasses and legumes in crop

rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability for pasture: Well suited
Suitability for hayland: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope helps to minimize erosion and increase germination.
• The slope may limit equipment use in the steeper areas when harvesting hay crops.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Erodibility, equipment use, and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Reforesting immediately after harvest using minimal site preparation and recommended tree species helps to control erosion and siltation of streams.
• Unsurfaced roads may be impassible during wet periods because of the high clay content of the soil.
• Maintaining surface litter helps to increase the infiltration of water and reduce seedling mortality rates.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential and wetness
Management measures and considerations:
• Installing a subsurface drainage system helps to intercept water from seeps and springs.
• Reinforcing basements or backfilling with coarse-textured material helps to strengthen foundations and prevents damage caused by shrinking and swelling.
• Vegetating disturbed areas and using erosion-control structures, such as sediment fences and catch basins, help to keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Shrink-swell potential and low strength
Management measures and considerations:
• Constructing roads on well-compacted fill material helps to overcome the shrink-swell limitation.
• Incorporating sand and gravel into the roadbed, compacting the roadbed, and designing roads that conform to the natural slope help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVe
Woodland ordination symbol: 9C, based on loblolly pine as the indicator species

WoA—Worsham loam, 0 to 3 percent slopes

Setting

Landscape: Piedmont and Triassic Basin; mainly in the central part of the county
Landform: Upland depressions, heads of drainageways, and drainageways
Landform position: Concave interfluves
Shape of areas: Irregular
Size of areas: 5 to 250 acres

Composition

Worsham soil and similar inclusions: 85 percent
Dissimilar inclusions: 15 percent

Typical Profile

Surface layer:
0 to 8 inches—very dark grayish brown loam

Subsurface layer:
8 to 12 inches—light brownish gray sandy loam

Subsoil:
12 to 18 inches—grayish brown sandy clay loam that has strong brown mottles
18 to 36 inches—light brownish gray sandy clay that has strong brown mottles
36 to 48 inches—gray clay that has light gray and strong brown mottles

Underlying material:
48 to 58 inches—gray sandy clay loam that has light gray mottles
58 to 64 inches—light gray clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very slow or slow
Available water capacity: High
Seasonal high water table: Within a depth of 1.0 foot from November through April
Hazard of flooding: None
Shrink-swell potential: Moderate
Slope class: Nearly level or gently sloping
Surface runoff: Slow
Hazard of water erosion: None or slight
Parent material: Residuum weathered from Triassic rock or a mixture of local colluvium and alluvium
Depth to bedrock: More than 60 inches

Minor Components

Dissimilar inclusions:
• The well drained Mayodan soils in the higher positions
• The moderately well drained Creedmoor and Claycreek soils in the slightly higher positions
• The moderately well drained Tetotum soils on the slightly higher adjacent terraces
• The somewhat poorly drained Chewacla soils on the lower-lying adjacent flood plains
• The somewhat poorly drained Hornsboro soils on the lower-lying adjacent flood plains
• Random areas of soils that have less clay in the subsoil than the Worsham soil; in areas closer to the flood plain

Similar inclusions:
• Roanoke soils in the lower landform positions on the lower-lying flood plains
• Random areas of Worsham soils that have a surface layer of loamy sand or sandy loam
• Areas of very poorly drained soils in the lower-lying positions
• Areas of somewhat poorly drained soils in the slightly higher positions

Land Use

Dominant Uses: Woodland
Other Uses: Cropland and pasture

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Wetness and soil fertility
Management measures and considerations:
• Installing a drainage system that includes open ditches, perforated tile, or land shaping helps to improve soil productivity.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.
• Managing crops so that the maximum amount of plant residue remains on the soil surface helps to control soil blowing and conserve soil moisture.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Wetness and soil fertility
Management measures and considerations:
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase productivity.
• Maintaining drainageways and ditches helps to remove excess water.
• Preventing overgrazing or preventing grazing when the soil is too wet helps to avoid soil compaction, decreased productivity, and a rough soil surface.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Restricting the use of standard wheeled and tracked equipment to dry periods helps to prevent rutting and soil compaction that occur when the soil is saturated.
• Bedding the soil prior to planting helps to establish seedlings and increase their survival rates.
• Using site preparation practices, such as chopping, prescribed burning, and herbicide application, helps to reduce competition from unwanted plants.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• Building structures on the highest part of the landscape and using artificial drainage help to reduce the risk of damage from wetness.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Wetness
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table helps to improve the performance of septic systems.

Local roads and streets

Suitability: Poorly suited
Management concerns: Wetness and low strength
Management measures and considerations:
• Constructing roads on raised, well-compacted fill material helps to overcome the wetness limitation.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IVw
Woodland ordination symbol: 9W, based on loblolly pine as the indicator species

WxB—Wynott loam, 2 to 8 percent slopes

Setting

Landscape: Piedmont; mainly in the northwestern part of the county
Landform: Broad ridges
Landform position: Convex interfluves
Shape of areas: Irregular
Size of areas: 5 to 100 acres

Composition

Wynott soil and similar inclusions: 75 to 80 percent
Dissimilar inclusions: 20 to 25 percent

Typical Profile

Surface layer:
0 to 5 inches—yellowish brown loam

Subsoil:
5 to 14 inches—strong brown clay
14 to 25 inches—yellowish brown clay

Underlying material:
25 to 36 inches—yellowish brown sandy loam saprolite

Bedrock:
36 to 55 inches—weathered diabase rock
55 inches—unweathered diabase rock

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: High
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: High
Slope class: Gently sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from diabase or intermediate igneous and high-grade metamorphic rock
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Nanford soils that have soft bedrock at a depth of 40 to 60 inches and moderate permeability in the subsoil
• Hiwassee soils that have moderate permeability and a low shrink-swell potential; on ridge crests and small knolls
• Badin soils that have a low shrink-swell potential; on ridge crests and small knolls
• Random areas of Goldston soils that have soft bedrock at a depth of less than 20 inches

Similar inclusions:
• Random areas of eroded Wynott soils that have a surface layer of clay loam
• Random areas of soils that have slow permeability and have hard bedrock at a depth of more than 60 inches

Land Use

Dominant Uses: Cropland and pasture
Other Uses: Woodland

Agricultural Development

Cropland

Suitability: Suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Resource management systems that include terraces and diversions, stripcropping, contour tillage, no-till farming, and crop residue management help to minimize erosion, control surface runoff, and maximize the infiltration of rainfall.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Well suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Erodibility, root penetration, and soil fertility
Management measures and considerations:
• Planting adapted species helps to ensure the production of high-quality forage and reduce the hazard of erosion.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Special care is needed when renovating pastures and establishing seedbeds to prevent further erosion.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Well suited
Productivity class: Moderately high for loblolly pine
Management concerns: Seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing foundations and basements or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.

• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and shrink-swell potential
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: IIIe
Woodland ordination symbol: 7D, based on loblolly pine as the indicator species

WyC—Wynott cobbly loam, 2 to 10 percent slopes, extremely stony

Setting

Landscape: Piedmont; mainly in the central part of the county
Landform: Narrow ridges
Landform position: Convex interfluves, hillslopes, and side slopes
Shape of areas: Long and narrow
Size of areas: 5 to 100 acres

Composition

Wynott soil and similar inclusions: 75 to 80 percent
Dissimilar inclusions: 20 to 25 percent

Typical Profile

Surface layer:
0 to 10 inches—very dark grayish brown cobbly loam

Subsoil:
10 to 22 inches—reddish brown clay that has dark brown mottles
22 to 28 inches—very dark grayish brown clay that has dark gray mottles

Underlying material:
28 to 31 inches—very dark gray sandy loam saprolite

Bedrock:
31 to 45 inches—weathered diabase rock
45 inches—unweathered diabase rock

Soil Properties and Qualities

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: Moderate
Depth to seasonal high water table: More than 6.0 feet
Hazard of flooding: None
Shrink-swell potential: High
Slope class: Gently sloping to strongly sloping
Surface runoff: Medium
Hazard of water erosion: Moderate
Parent material: Residuum weathered from diabase or intermediate igneous and high-grade metamorphic rock
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock

Minor Components

Dissimilar inclusions:
• Random areas of Iredell soils that have hard bedrock at a depth of more than 60 inches
• Wadesboro and Mayodan soils that have moderate permeability and a moderate shrink-swell potential in the subsoil; on the outer edge of map units
• Random areas of Pinoka soils that have less clay in the subsoil than the Wynott soil and have hard bedrock at a depth of 20 to 40 inches

Similar inclusions:
• Random areas of eroded Wynott soils that have a surface layer of clay loam
• Random areas of soils that have slow permeability and have hard bedrock at a depth of more than 60 inches

Land Use

Dominant Uses: Woodland
Other Uses: Pasture

Agricultural Development

Cropland

Suitability: Poorly suited
Commonly grown crops: Corn, small grain, cotton, and soybeans
Management concerns: Root penetration, tilth, and soil fertility
Management measures and considerations:
• This map unit has severe limitations affecting crop

production. A site should be selected on better suited soils.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes crop productivity.

Pasture and hayland

Suitability: Suited
Commonly grown crops: Tall fescue, orchardgrass, legumes, and clover
Management concerns: Root penetration, tilth, and soil fertility
Management measures and considerations:
• Removing stones or limiting equipment use to the less stony areas helps to increase soil productivity.
• Using rotational grazing and implementing a well-planned clipping and harvesting schedule help to maintain pastures and increase forage production.
• Including perennial grasses and legumes in crop rotations helps to penetrate and break up the clayey root zone.
• Incorporating plant residue into the soil helps to improve the water-holding capacity.
• Planting shallow-rooted crops helps to overcome the moderately deep rooting depth of the soil.
• Applying lime and fertilizer according to recommendations based on soil tests helps to increase the availability of plant nutrients and maximizes productivity when establishing, maintaining, or renovating hayland and pasture.

Woodland

Suitability: Suited
Productivity class: Moderately high for loblolly pine
Management concerns: Equipment use and seedling survival
Management measures and considerations:
• Planting improved varieties of loblolly pine helps to increase productivity.
• Using cable logging methods helps to overcome limitations for road and trail construction caused by the large number of stones on the soil surface.
• Performing logging operations only during periods when the soil is not wet helps to prevent rutting of the soil surface and possible root damage from compaction.
• Special site preparation, such as harrowing and bedding, helps to establish seedlings, reduces mortality rates, and increases early seedling growth.

Urban Development

Dwellings

Suitability: Poorly suited
Management concerns: Shrink-swell potential
Management measures and considerations:
• Reinforcing foundations and basements or backfilling with coarse-textured material helps to strengthen buildings and prevents damage caused by shrinking and swelling.
• Vegetating cleared and graded areas as soon as possible or constructing silt fences helps to maintain soil stability and keep sediments onsite.

Septic tank absorption fields

Suitability: Poorly suited
Management concerns: Restricted permeability and depth to bedrock
Management measures and considerations:
• The Anson County Health Department should be contacted for guidance in developing sanitary facilities.
• Increasing the size of the septic tank absorption field helps to improve its performance.
• Installing septic system distribution lines only during periods when the soil is not wet helps to prevent smearing and sealing of trench walls.
• Locating and using areas of the deeper included soils may improve the performance of filter fields.

Local roads and streets

Suitability: Poorly suited
Management concerns: Low strength and shrink-swell potential
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to improve soil strength.
• Removing as much of the shrink-swell clay as possible and increasing the thickness of the base aggregate help to improve soil performance.
• Vegetating cut and fill slopes as soon as possible after construction helps to stabilize the soil and prevent excessive erosion.

Interpretive Groups

Land capability classification: VIs
Woodland ordination symbol: 7X, based on loblolly pine as the indicator species

Use and Management of the Soils

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

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

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

Generally, the soils in Anson County that are well suited to crops are also well suited to urban uses. The data concerning specific soils in the county can be used in planning future land use patterns. The potential for farming should be considered relative to any soil limitations and the potential for nonfarm development.

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

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

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

Crops and Pasture

Robert E. Horton, Jr., District Conservationist, Natural Resources Conservation Service, and Richard Melton, Crops Agent, Cooperative Extension Service, helped prepare this section.

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils are identified, the system of land capability classification used by the Natural Resources Conservation Service is explained, the estimated yields of the main crops and hay and pasture plants are listed for each soil, and prime farmland is described.

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

Federal and State regulations require that any area designated as wetlands cannot be altered without prior approval. Contact the local office of the Natural Resources Conservation Service for identification of hydric soils and potential wetlands.

In 1992, more than 20,600 acres in Anson County was used for crops. Nearly 20,000 acres was used as permanent pasture. Because of soil suitability and a favorable climate, many field crops that are not commonly grown in Anson County can also be produced.

Corn, soybeans, and cotton are the dominant row crops. There is a small acreage of tobacco. Grain sorghum can also be grown profitably if economic conditions are favorable.

Wheat is the most common small grain crop. Rye, barley, and oats are also grown. Grass seed can be produced from fescue.

Specialty crops include vegetables, small fruits, tree fruits, flowers, and many nursery plants. Melons, strawberries, sweet corn, tomatoes, and peppers are the most commonly grown vegetables and small fruits. Peaches and apples are the most common tree fruits.

Deep and very deep soils that are characterized by good natural drainage and that warm up early in spring are especially well suited to many vegetables and small fruits. These soils include Dothan, Emporia, Georgeville, Lillington, Pacolet, and Vaucluse soils that have slopes of less than 8 percent. They make up about 18,600 acres in the survey area. Vegetables and fruits generally can be planted and harvested earlier on these soils than on other soils in the survey area.

Most of the well drained soils in the survey area are suitable for orchard crops and nursery plants. Soils in low areas where frost is frequent generally are poorly suited to early vegetables, small fruits, and orchard crops.

The latest information about specialty crops can be obtained at the local office of the Cooperative Extension Service or the Natural Resources Conservation Service.

The nearly level to moderately sloping soils in the survey area generally are well suited to row crops. Most of the row crops are grown on uplands because the acreage of bottom land and stream terraces is limited. The broad ridges and the more nearly level areas are suitable for grain crops. Deep, well drained soils, such as Ailey, Dothan, Emporia, and Fuquay soils, are suited to tobacco. During years of normal rainfall, these soils generally produce high yields. The more sloping Badin, Pacolet, and Tarrus soils are commonly used for hay and pasture.

Some areas that are idle, wooded, or pastured have good potential for use as cropland. Food production could be increased considerably by applying the latest technology to all of the cropland in the survey area. The information in this soil survey can facilitate the application of such technology.

Cropland

Management considerations on cropland in the county include controlling erosion, installing a drainage system, improving soil fertility, applying a system of chemical weed control, and improving tilth.

Erosion control.—Water erosion is a major concern on most of the soils used for cropland in Anson County. It is a hazard on soils that have a slope of more than 2 percent. White Store and Polkton soils are examples. As the slope increases, the hazard of erosion and the difficulty in controlling erosion also increase.

Loss of the surface layer through erosion is damaging. Soil productivity is reduced as the surface layer is lost and part of the subsoil is incorporated into the plow layer. Loss of the surface layer is especially damaging on soils that have a clayey subsoil, such as White Store and Polkton soils, and on soils that have bedrock in or below the subsoil that limits the depth of the root zone, such as Goldston and Badin soils. Erosion on farmland results in the sedimentation of streams. Controlling erosion minimizes the pollution of water by runoff carrying plant nutrients, soil particles, and plant residue. It improves the quality of water for municipal use, for recreation, and for fish and wildlife.

Preparing a good seedbed is difficult where much or all of the original friable surface layer has been lost through erosion. This degree of erosion is common in areas of White Store and Badin soils.

Erosion-control practices provide a protective surface cover, reduce runoff, and increase the rate of water infiltration. A cropping system that keeps a vegetative cover on the soil for extended periods helps to minimize soil loss and maintain the productive capacity of the soil. Including forage crops of grasses and legumes in crop rotations helps to provide surface cover and control erosion. The forage crops also add nitrogen to the soil and improve tilth.

Conservation tillage practices, such as minimizing tillage and leaving crop residue on the surface, help to increase the rate of water infiltration, reduce runoff, and control erosion. These practices can be effective on most of the soils in the survey area. Most of the well drained, sloping, upland areas that are used for row crops and small grain are planted using conservation tillage methods. Long-term, continuous conservation tillage helps to improve tilth and soil quality.

Terraces and diversions shorten the length of slopes and thus minimize erosion caused by runoff. They are most effective on deep, well drained soils that have smooth, regular slopes. Georgeville and Tarrus soils are examples. These measures are less effective on soils that have irregular slopes, shallow bedrock (within a depth of 40 inches), and eroded surface layers. Terraces and diversions are not widely used today in Anson County.

Contour farming, cross-slope farming, and stripcropping can help to control erosion on many of the soils in the survey area. They are best suited to soils that have smooth, uniform slopes, including most areas of Pacolet and Tarrus soils. Contour farming and stripcropping are not widely used today in Anson County.

Information about erosion-control measures for each kind of soil is available at the local office of the Natural Resources Conservation Service.

Drainage.—Excessive wetness is a management concern on about 10 percent of the cropland in Anson County. Some soils are so wet that production of the crops commonly grown in the survey area is difficult unless a drainage system is installed.

Wehadkee and Worsham soils and other poorly drained soils are so wet that crops are damaged during most years unless a drainage system is installed. These soils make up about 18,300 acres in the survey area.

The design of both surface and subsurface drainage systems varies according to the kind of soil. Surface drains or a combination of surface drains and tile drains is needed in intensively row-cropped areas of the somewhat poorly drained Creedmoor and Claycreek soils. Drains should be installed at closer intervals in the more slowly permeable soils, such as Creedmoor soils, than in the more rapidly permeable soils, such as Claycreek soils.

Managing drainage in conformance with regulations concerning wetlands may require special permits and extra planning. In some cases, drainage of wet soils is not permitted. The local office of the Natural Resources Conservation Service should be contacted for identification of hydric soils and potential wetlands.

Soils along the river bottoms in Anson County are occasionally flooded for brief periods, generally between December and June. Flash flooding as a result of intensive rainfall can occur on the upper reaches of stream bottoms at any time of the year.

Soil fertility.—The soils in Anson County generally are low in natural fertility and are naturally acid. Additions of lime and fertilizer are needed for the production of most kinds of crops.

Liming requirements are a major concern on cropland. The acidity level in the soil affects the availability of many nutrients to plants and the activity of beneficial bacteria. Lime neutralizes exchangeable aluminum in the soil and thus counteracts the adverse effects of high levels of aluminum on many crops. Liming adds calcium (from calcitic lime) or calcium and magnesium (from dolomitic lime) to the soil.

A soil test is a guide to what amount and kind of lime should be used. The desired pH levels may differ, depending on the soil properties and the crop to be grown.

Nitrogen fertilizer is required for most crops. It is generally not required, however, for clover, in some rotations of soybeans, and for alfalfa that is established. A reliable soil test is not available for predicting nitrogen requirements. Appropriate rates of nitrogen application are described in the section "Yields per Acre."

Soil tests can indicate the need for phosphorus and potassium fertilizer. Phosphorus and potassium tend to build up in the soil.

Chemical weed control.—The use of herbicides for weed control is an integral part of modern farming. Selected soil properties, such as organic matter content and texture of the surface layer, affect the rate of herbicide application. Estimates of both of these properties were determined for the soils in this survey area. Table 16 shows a general range of organic matter content in the surface layer of the soils. The texture of the surface layer is shown in the USDA texture column in table 15. Long-term, continuous conservation tillage and other practices can increase the organic matter content.

In some areas the organic matter content projected for the different soils is outside the range shown in the table. The content can be higher in soils that have received large amounts of animal or manmade waste. Soils that have recently been brought into cultivation may have a higher content of organic matter in the surface layer than similar soils that have been cultivated for a long time. Conservation tillage can increase the content of organic matter in the surface layer. A lower content of organic matter is common where the surface layer has been partly or completely removed by erosion or land smoothing. Current soil tests should be used for specific organic matter determinations.

Tilth.—Soil tilth is an important factor in the germination of seeds and the infiltration of water into the soil. Soils that have good tilth are granular and porous.

Some of the soils in the survey area that are used for crops have a light-colored surface layer of silt loam and a low content of organic matter. Generally, the structure of these soils is weak. Periods of heavy rainfall result in the formation of a crust on the surface. The crust is hard when dry and nearly impervious to water. It reduces the rate of water infiltration and increases the runoff rate. Regular additions of crop residue, manure, and other organic material can improve soil structure and prevent the formation of a crust. Conservation tillage is the best way to manage soils that are susceptible to crusting.

Severely eroded, clayey soils, such as White Store and Polkton soils, become cloddy if they are plowed outside a narrow range in moisture content. Fall plowing on these soils generally results in better tilth in spring.

Some soils in the survey area have poor tilth because of gravel in the surface layer. These soils are in small, isolated areas along river bottoms and terraces. The content and size of the pebbles affect the use of tillage implements.

Stones and boulders are common in some of the residual soils in the survey area. In some places gravel, rock, or rock fragments prevent tillage. In other places they can be removed.

Pasture and Hayland

In 1996, Anson County had more than 17,900 beef and dairy cattle. Most of the pasture and hayland supports a mixture of grasses and legumes. Most of the hay is grown in rotation with pasture. The harvested hay commonly is rolled into large, round bales or is used as grass silage.

Selection of forage species.—A successful livestock enterprise depends on a forage program that provides large quantities of good-quality feed. In most areas of hayland and pasture in Anson County, renovation, brush control, and measures that prevent overgrazing are needed.

The soils in the survey area vary widely in their ability to produce grasses and legumes because of differences in such properties as depth to bedrock or to other limiting layers, internal drainage, and available water capacity. The forage species selected for planting should be appropriate for the soil.

The nearly level and gently sloping, deep and very deep, well drained soils should be planted to the highest producing crops, such as silages, alfalfa, or a mixture of alfalfa and orchardgrass. Sod-forming grasses, such as tall fescue and orchardgrass, minimize erosion in the steeper areas. Alfalfa should be seeded with cool-season grasses in areas where the soil is at least 2 feet deep and is well drained. The more poorly drained soils and the soils that are less than 2 feet deep are suited to clover-grass mixtures or to pure stands of clover or grasses. Legumes can be established through renovation in areas that support sod-forming grasses.

The intended use should be considered when forage species are selected. Selected species should provide maximum quality and versatility in the forage program. Legumes generally produce higher quality feed than grasses. They should be grown to the maximum extent possible. The taller legumes, such as alfalfa and red clover, are more versatile than legumes that are used primarily for grazing, such as white clover. Orchardgrass and tall fescue are suited to use as hay and silage.

Tall fescue is an important cool-season grass. It is suited to a wide range of soil conditions and is grown for both pasture and hay. The growth that occurs from August through November commonly accumulates in the field and is used for grazing in late fall and in winter. For maximum production, nitrogen fertilizer should be applied during the period when the grass is accumulating. The rate of application should be based on the desired level of production.

Warm-season grasses that are planted during the period from early April through late May help to supplement cool-season grasses, such as tall fescue. They grow well during warm periods, especially from mid-June through September, when the growth of cool-season grasses is slow. Examples of warm-season grasses are coastal bermudagrass, common bermudagrass, switchgrass, and eastern gammagrass. Switchgrass and eastern gammagrass are native warm-season grasses that have been used successfully in Anson County.

Maintenance of pasture and hayland.—Renovation can increase forage yields in areas that have a good stand of grass. It includes partially destroying the sod, applying lime and fertilizer, and seeding desirable forage species. Adding legumes to the stand of grass provides high-quality feed. Legumes increase summer production and transfer nitrogen from the air into the soil. Under growing conditions, alfalfa can fix 200 to 300 pounds of nitrogen per acre per year, red clover can fix 100 to 200 pounds, and ladino clover can fix 100 to 150 pounds. An acre of annual forage legumes, such as vetch, can fix 75 to 100 pounds of nitrogen per year.

Additional information about managing pasture and hayland can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Chemical Weed Control

The use of herbicides for weed control is a common practice on the cropland in Anson County. It decreases the need for tillage and is an integral part of modern farming. Selected soil properties, such as organic matter content and texture of the surface layer, affect the rate of herbicide application. Estimates of both of these properties were determined for the soils in the county. Table 16 shows a general range of organic matter content in the surface layer of the soils. The texture of the surface layer is shown in the USDA texture column in table 15.

In some areas the organic matter content projected for the different soils is outside the range shown in the table. The content can be higher in soils that have received high amounts of animal or manmade waste. Soils that have recently been brought into cultivation may have a higher content of organic matter in the surface layer than similar soils that have been cultivated for a long time. Conservation tillage can increase the content of organic matter in the surface layer. A lower content of organic matter is common where the surface layer has been partly or completely removed by erosion or land smoothing. Current soil tests should be used for specific organic matter content determinations.

Soil Fertility

The soils in Anson County generally are low in natural fertility. They are naturally acid. Additions of lime and fertilizer are needed for the production of most kinds of crops.

Liming requirements are a major concern on cropland. The acidity level in the soil affects the availability of many nutrients to plants and the activity of beneficial bacteria and fungi. Lime also neutralizes exchangeable aluminum in the soil and thus counteracts the adverse effects of high levels of aluminum on many crops. Liming adds calcium (from calcitic lime) or calcium and magnesium (from dolomitic lime) to the soil.

A soil test is a guide to what amount and kind of lime should be used. The desired pH levels may differ, depending on the soil properties and the crop to be grown.

Nitrogen fertilizer is required for most crops. It is generally not required, however, for clover, in some rotations of soybeans, or for alfalfa that is established. A reliable soil test is not available for predicting nitrogen requirements. Appropriate rates of nitrogen application are described in the section "Yields per Acre."

Soil tests can indicate the need for phosphorus and potassium fertilizer. They are needed because phosphorus and potassium tend to build up in the soil.

Yields per Acre

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

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

A high level of management includes maintaining proper soil reaction and fertility levels as indicated by standard soil tests. The application rate of nitrogen for corn on soils that have a yield potential of 125 to 150 bushels per acre should be 140 to 160 pounds per acre. If the yield potential for corn is 100 bushels per acre or less, a rate of 100 to 120 pounds of nitrogen per acre should be used. The application of nitrogen in excess of that required for potential yields generally is not recommended. The excess nitrogen fertilizer that is not utilized by the crop is an unnecessary expense and causes a hazard of water pollution. If corn or cotton is grown after the harvest of soybeans or peanuts, nitrogen rates can be reduced by about 20 to 30 pounds per acre. Because nitrogen can be readily leached from sandy soils, applications may be needed on these soils more than once during the growing season.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

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

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. 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 woodland and for engineering purposes.

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

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

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

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

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

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

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

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

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

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

The acreage of soils in each capability class and subclass is shown in table 6. The capability classification of each map unit is given in the section "Detailed Soil Map Units" and in the yields table.

Prime Farmland

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

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forest land, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. The 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 75,000 acres in the survey area, or nearly 22 percent of the total acreage, meets the soil requirements for prime farmland. Scattered areas of this land are throughout the county, but most are in the southern part, mainly in generaly soil map units 3, 4, and 5, which are described under the heading "General Soil Map Units." About 20,000 acres of this prime farmland is used for crops. The crops grown on this land are mainly corn, soybeans, and cotton.

The map units in the survey area that are considered prime farmland are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures used to overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

Woodland Management and Productivity

Albert Coffey, Forester, Natural Resources Conservation Service, helped prepare this section.

Owners of forest land in Anson County have many objectives. These objectives include producing timber; conserving wildlife, soil, and water; preserving esthetic values; and providing opportunities for recreational activities. Public demand for clean water and recreational areas creates pressures and opportunities for owners of forest land.

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; propagating the more productive species and genetic varieties; providing short rotations and complete fiber utilization; controlling insects, diseases, and weeds; and improving tree growth by applications of fertilizer. Even though timber crops require decades to grow, the goal of intensive 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.

Commercial forests cover about 248,527 acres, or about 73 percent of the land area of Anson County *(11)*. Commercial forest is land that is producing or is capable of producing crops of industrial wood and that has not been withdrawn from timber production. Loblolly pine is the most important timber species in the county because it grows fast, is adapted to the soil and climate, brings the highest average sale value per acre, and is easy to establish and manage.

For purposes of forest inventory, the predominant forest types identified in Anson County are as described in the following paragraphs *(8, 11)*.

Loblolly-shortleaf. This forest type covers 137,059 acres. It is predominantly loblolly pine, shortleaf pine, or other kinds of southern yellow pine (excluding longleaf pine and slash pine) or a combination of these species. Commonly included trees are oak, hickory, and gum.

Oak-pine. This forest type covers 40,111 acres. It is predominantly hardwoods, usually upland oaks. Pine species make up 25 to 50 percent of the stand. Commonly included trees are gum, hickory, and yellow-poplar.

Oak-hickory. This forest type covers 61,183 acres. It is predominantly upland oaks or hickory, or both. Commonly included trees are yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress. This forest type covers 10,174 acres. It is bottom-land forest consisting predominantly of tupelo, blackgum, sweetgum, oaks, southern cypress, or a combination of these species. Commonly included trees are cottonwood, willow, ash, elm, hackberry, and maple.

One of the first steps in planning intensive forest management is to determine the potential productivity of the soil for several alternative tree species. The most productive and valued trees are then selected for each soil type. Site and yield information enables a forest manager to estimate future wood supplies. These estimates are the basis of realistic decisions concerning expenses and profits associated with intensive forest management, land acquisition, or industrial investments.

The potential productivity of forest land depends on physiography, soil properties, climate, and the effects of past management, including erosion. Specific soil properties and site characteristics, including soil depth, texture, structure, and depth to the water table, affect forest productivity primarily by influencing available water capacity, aeration, and root development. The net effects of the interaction of these soil properties and site characteristics determine the potential site productivity.

Other site factors are also important. The gradient and length of slopes affect water movement and availability. The amount of rainfall and length of growing season influence site productivity.

This soil survey can be used to plan ways to increase the productivity of forest land. 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. Some soils require special reforestation efforts. In the section “Detailed Soil Map Units,” the description of each map unit in the survey area suitable for timber includes information about productivity, limitations in harvesting timber, and management concerns in producing timber. Table 8 summarizes this forestry information and rates the soils for a number of factors to be considered in management. *Slight, moderate*, and *severe* are used to indicate the degree of the major soil limitations to be considered in management.

Table 8 lists the *ordination symbol* for each soil. The first part of the ordination symbol, a number, indicates the potential productivity of a soil for the indicator species in cubic meters per hectare per year. The larger the number, the greater the potential productivity. Potential productivity is based on the site index and the point where mean annual increment is the greatest.

The second part of the ordination symbol, a letter, indicates the major kind of soil limitation affecting use and management. The letter *R* indicates a soil that has a significant limitation because of the slope. The letter *X* indicates that a soil has restrictions because of stones or rocks on the surface. The letter *W* indicates a soil in which excessive water, either seasonal or year-round, causes a significant limitation. The letter *D* indicates a soil that has a limitation because of a restricted rooting depth, such as a shallow soil that is underlain by hard bedrock, a hardpan, or other layers that restrict roots. The letter *C* indicates a soil that has a limitation because of the kind or amount of clay in the upper part of the profile. The letter *S* indicates a dry, sandy soil. The letter *A* indicates a soil having no significant limitations that affect forest use and management. If a soil has more than one limitation, the priority is as follows: R, X, W, D, C, and S.

Ratings of the *erosion hazard* indicate the probability that damage may occur if site preparation or harvesting activities expose the soil. The risk is *slight* if no particular preventive measures are needed under ordinary conditions; *moderate* if erosion-control measures are needed for particular silvicultural activities; and *severe* if special precautions are needed to control erosion for most silvicultural activities. Ratings of moderate or severe indicate the need for construction of higher standard roads, additional maintenance of roads, additional care in planning harvesting and reforestation activities, or the use of special equipment.

Ratings of *equipment limitation* indicate limits on the use of forest management equipment, year-round or seasonal, because of such soil characteristics as slope, wetness, stoniness, and susceptibility of the surface layer to compaction. As slope gradient and length increase, the use of wheeled equipment becomes more difficult. The rating is *slight* if equipment use is restricted by wetness for less than 2 months and if special equipment is not needed. The rating is *moderate* if slopes are so steep that wheeled equipment cannot be operated safely across the slope, if wetness restricts equipment use from 2 to 6 months per year, if stoniness restricts the use of ground-based equipment, or if special equipment is needed to prevent or minimize compaction. The rating is *severe* if slopes are so steep that tracked equipment cannot be operated safely across the slope, if wetness restricts equipment use for more than 6 months per year, if stoniness restricts the use of ground-based equipment, or if special equipment is needed to prevent or minimize compaction. Ratings of moderate or severe indicate a need to choose the best suited equipment and to carefully plan the timing of harvesting and other management activities.

Ratings of *seedling mortality* refer to the probability of the death of the naturally occurring or properly planted seedlings of good stock in periods of normal rainfall, as influenced by kinds of soil or topographic features. Seedling mortality is caused primarily by too much water or too little water. The factors used in rating a soil for seedling mortality are texture of the surface layer, depth to a high water table and the length of the period when the water table is high, rock fragments in the surface layer, and rooting depth. The mortality rate generally is highest on soils that have a sandy or clayey surface layer. The risk is *slight* if, after site preparation, expected mortality is less than 25 percent; *moderate* if expected mortality is between 25 and 50 percent; and *severe* if expected mortality exceeds 50 percent. Ratings of moderate or severe indicate that it may be necessary to use containerized or larger than usual planting stock or to make special site preparations, such as bedding or furrowing. Reinforcement planting is often needed if the risk is moderate or severe.

Ratings of *windthrow hazard* indicate the likelihood that trees will be uprooted by the wind. A restricted rooting depth is the main reason for windthrow. The rooting depth can be restricted by a high water table, by bedrock, or by a combination of such factors as soil wetness, texture, structure, and depth. The risk is *slight* if strong winds break trees but do not uproot them; *moderate* if strong winds blow a few trees over and break many trees; and *severe* if moderate or strong winds commonly blow trees over. Ratings of moderate or severe indicate that care is needed in thinning or that the stand should not be thinned at all. Special equipment may be needed to prevent damage to shallow root systems in partial cutting operations. A plan for the periodic removal of windthrown trees and the maintenance of a road and trail system may be needed.

The *potential productivity* of *common trees* on a soil is expressed as a *site index* and a *volume* number. The predominant common trees are listed in table 8 in the order of their observed occurrence. Generally, only two or three tree species dominate. The first tree listed for each soil is the indicator species for that soil. An indicator species is a tree that is common in the area and that is generally the most productive on a given soil.

For soils that are commonly used for timber production, the yield is predicted in cubic feet per acre per year. It is predicted at the point where mean annual increment culminates. The estimates of the productivity of the soils in this survey are based mainly on loblolly pine and yellow-poplar *(4,7)*.

The *site index* is determined by taking height measurements and determining the age of selected trees within stands of a given species. This index is the average height, in feet, that the trees attain in a specified number of years (50 years in this survey). This index applies to fully stocked, even-aged, unmanaged stands. Productivity of a site can be improved through management practices, such as bedding, ditching, managing water, applying fertilizer, and planting genetically improved species.

The *volume* is the yield likely to be produced by the most important trees, expressed in cubic feet per acre per year. Cubic feet per acre can be converted to cubic meters per hectare by dividing by 14.3. It can be converted to board feet by multiplying by a factor of about 5. For example, a productivity class of 8 means that the soil can be expected to produce about 114 cubic feet per acre per year at the point where mean annual increment culminates, or about 570 board feet per acre per year.

Trees to manage are those that are used for reforestation or, under suitable conditions, natural regeneration. They are suited to the soils and can produce a commercial wood crop. The desired product, topographic position (such as a low, wet area), and personal preference are three factors among many that can influence the choice of trees for use in reforestation.

Recreation

Anson County has several recreational opportunities. The Pee Dee National Wildlife Refuge is located between Wadesboro and Ansonville. The refuge is home to white-tailed deer, beaver, fox, opossum, gray squirrel, bobcat, rabbit, raccoon, and different types of owls. The refuge is also home to the red cockaded woodpecker, an endangered species. Blewett Falls Lake offers opportunities for boating, fishing, and waterskiing.

The soils of the survey area are rated in table 9 according to the limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In table 9, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or a combination of these measures.

The information in table 9 can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 12 and interpretations for dwellings without basements and for local roads and streets in table 11.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have gentle slopes and are not wet or subject to flooding during the period of use. The surface has few or no stones or boulders, absorbs rainfall readily but remains firm, and is not dusty when dry. Strong slopes and stones or boulders can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes or stones or boulders that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the period of use. The surface is free of stones and boulders, is firm after rains, and is not dusty when dry. If grading is needed, the depth of the soil over bedrock should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes and few or no stones or boulders on the surface.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes and no stones or boulders on the surface. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

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

In table 10, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat. The ratings in table 10 are intended to be used as a guide and are not site specific. Onsite investigation is needed for individual management plans.

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

The elements of wildlife habitat are described in the following paragraphs.

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

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

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

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

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

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

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are waterfowl feeding areas and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, meadowlark, field sparrow, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, and white-tailed deer.

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

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 estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

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

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

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

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

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

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

Building Site Development

Table 11 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock or a very firm, dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the high water table.

Dwellings and *small commercial buildings* are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. Depth to a high water table, depth to bedrock, large stones, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock, depth to a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, frost action potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, depth to a high water table, depth to bedrock, and the available water capacity in the upper 40 inches affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established. Soil tests are essential to determine liming and fertilizer needs. Help in making soil tests or in deciding what soil additive, if any, should be used can be obtained from the office of the Brown Creek Soil and Water Conservation District or the local office of the Cooperative Extension Service.

Sanitary Facilities

Table 12 shows the degree and the kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

Table 12 also shows the suitability of the soils for use as daily cover for landfill. A rating of *good* indicates that soil properties and site features are favorable for the use and that good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, depth to a high water table, depth to bedrock, and flooding affect absorption of the effluent. Large stones and bedrock interfere with installation.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. The animal waste lagoons commonly used in farming operations are not considered in the ratings. They are generally deeper than the lagoons referred to in the table and rely on anaerobic bacteria to decompose waste materials.

Table 12 gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, depth to a high water table, depth to bedrock, flooding, large stones, and content of organic matter.

Excessive seepage resulting from rapid permeability in the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope or bedrock can cause construction problems, and large stones can hinder compaction of the lagoon floor.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground-water pollution. Ease of excavation and revegetation should be considered.

The ratings in table 12 are based on soil properties, site features, and observed performance of the soils. Permeability, depth to bedrock, a high water table, slope, and flooding affect both types of landfill. Texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium affect trench landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, coarse fragments, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils that are free of large stones or excess gravel are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to soil blowing.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 13 gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

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

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

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

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the high water table is more than 3 feet. Soils rated *fair* have more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the high water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10, a high shrink-swell potential, many stones, or slopes of more than 25 percent. They are wet and have a high water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 13, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is up to 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Coarse fragments of soft bedrock, such as shale, siltstone, and weathered granite saprolite, are not considered to be sand and gravel.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a high water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a high water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are naturally fertile or respond well to fertilizer and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel or stones, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have a large amount of gravel or stones, have slopes of more than 15 percent, or have a high water table at or near the surface.

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

Water Management

Table 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and for embankments, dikes, and levees. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives the restrictive features that affect each soil for drainage, irrigation, terraces and diversions, and grassed waterways.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area. Ponds that are less than about 2 acres in size are indicated on the maps by a special symbol.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

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

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

Soil material that has a high content of sodium also is poorly suited to use in the construction of embankments because it is characterized by a high rate of dispersion. Hornsboro soils are an example of soils that have a high content of sodium. Other areas of Triassic soils may have a high enough sodium content to affect construction of embankments.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock or to other layers that affect the rate of water movement, permeability, depth to a high water table or depth of standing water if the soil is subject to ponding, slope, susceptibility to flooding, and the potential for frost action. Excavating and grading and the stability of ditchbanks are affected by depth to bedrock, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Drainage may be a major management consideration in some areas. Management of drainage in conformance with regulations concerning wetlands may require special permits and extra planning. The local office of the Natural Resources Conservation Service should be contacted for identification of hydric soils and potential wetlands.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to a high water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock. The performance of a system is affected by the availability of suitable irrigation water, the depth of the root zone, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of soil blowing or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct surface water to outlets at a nonerosive velocity. Large stones, wetness, slope, and depth to bedrock affect the construction of grassed waterways. A hazard of soil blowing, a low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

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

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

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 15 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading “Soil Series and Their Morphology.”

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

Classification of the soils is determined according to the Unified soil classification system *(2)* and the system adopted by the American Association of State Highway and Transportation Officials *(1)*.

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

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

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

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

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

Physical and Chemical Properties

Table 16 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

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

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

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

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

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

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

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; *high*, 6 to 9 percent; and *very high*, more than 9 percent.

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) to predict the average annual rate of soil loss by sheet and rill erosion. Losses are expressed in tons per acre per year. These estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.02 to 0.64. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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

Wind erodibility groups are made up of soils that have similar properties affecting their resistance to soil blowing in cultivated areas. The groups indicate the susceptibility to soil blowing. The soils assigned to group 1 are the most susceptible to soil blowing, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to soil blowing because of coarse fragments on the surface or because of surface wetness.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 16, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

Table 17 gives estimates of various soil and water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils are assigned to one of four groups. They are grouped according to the infiltration of water when the soils are thoroughly wet and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

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

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

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

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

If a soil is assigned to two hydrologic groups in table 17, the first letter is for drained areas and the second is for undrained areas.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflowing streams, by runoff from adjacent slopes, or by inflow from high tides. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in swamps and marshes or in a closed depression is considered ponding.

Table 17 gives the frequency and duration of flooding and the time of year when flooding is most likely to occur.

Frequency, duration, and probable dates of occurrence are estimated. Frequency generally is expressed as none, rare, occasional, or frequent. *None* means that flooding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding 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 flooding 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 flooding is more than 50 percent in any year). Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 days to 1 month, and *very long* if more than 1 month. Probable dates are expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

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

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

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The estimates are based mainly on the evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. Indicated in table 17 are the depth to the high water table; the kind of water table—that is, *perched* or *apparent;* and the months of the year that the water table commonly is high. A water table that is seasonally high for less than 1 month is not indicated in table 17.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Two numbers in the column showing depth to the high water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. “More than 6.0” indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Depth to bedrock is given if bedrock is within a depth of 5 feet. The depth is based on many soil borings and on observations during soil mapping. The rock is specified as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

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

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

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

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(12)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or on laboratory measurements. Table 18 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

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

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

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizon development, plus *udult*, the suborder of the Ultisols that occurs in humid climates).

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

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, depth of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine, mixed, semiactive, thermic Typic Hapludults.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. There can be some variation in the texture of the surface layer or of the underlying material within a series.

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 location of the typical pedon is described, and coordinates are identified by longitude and latitude. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” *(13)*. Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” *(12)* and in “Keys to Soil Taxonomy” *(14)*. Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units of each soil series are described in the section “Detailed Soil Map Units.”

Ailey Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the Bt horizon; slow in the Btx horizon

Parent material: Loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Convex interfluves and side slopes and nose slopes
Commonly associated soils: Candor, Dothan, Emporia, Fuquay, and Vaucluse soils
Slope range: 2 to 15 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Kanhapludults

Typical Pedon

Ailey loamy sand, 2 to 8 percent slopes; 2 miles south of Morven on Secondary Road 1832, about 500 feet west on a field road, 1,000 feet north of the road, in a field; Morven West USGS topographic quadrangle; lat. 34 degrees 50 minutes 04 seconds N. and long. 80 degrees 00 minutes 28 seconds W.

Ap—0 to 9 inches; brown (10YR 5/3) loamy sand; weak coarse granular structure; very friable; common fine roots; 2 percent fine gravel, by volume; strongly acid; abrupt smooth boundary.

E—9 to 22 inches; light yellowish brown (10YR 6/4) loamy sand; weak coarse granular structure; very friable; common fine roots; 2 percent fine gravel, by volume; very strongly acid; abrupt smooth boundary.

Bt—22 to 30 inches; yellowish brown (10YR 5/6) sandy clay loam; many medium distinct strong brown (7.5YR 5/8) mottles; weak medium subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; 1 percent fine gravel, by volume; very strongly acid; clear smooth boundary.

Btx1—30 to 40 inches; yellowish brown (10YR 5/8) sandy clay loam; common medium prominent yellowish red (5YR 5/6) mottles; weak medium subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; 20 percent hard and brittle bodies; 1 percent fine gravel, by volume; very strongly acid; gradual smooth boundary.

Btx2—40 to 54 inches; strong brown (7.5YR 5/8) sandy clay loam; common medium distinct yellowish red (5YR 5/6) mottles; weak coarse subangular blocky structure; friable; few faint clay films on faces of some peds; 40 percent hard and brittle bodies; very strongly acid; abrupt smooth boundary.

Cd—54 to 62 inches; red (2.5YR 5/8) sandy loam; common medium prominent strong brown (7.5YR 5/8) mottles; massive; friable; 40 percent hard and brittle bodies; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: Less than 25 percent, by volume; mostly gravel and 1- to 8-inch-sized ironstone
Reaction: Strongly acid or very strongly acid except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3
Texture (fine-earth fraction)—loamy sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—loamy sand, loamy coarse sand, sand, or coarse sand

BE horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture (fine-earth fraction)—sandy loam, coarse sandy loam, loamy sand, or loamy coarse sand

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8
Mottles (if they occur)—shades of red or brown
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, or sandy clay loam

Btx horizon:
Color—horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8 or is mottled
Mottles—shades of red, brown, yellow, or gray
Texture (fine-earth fraction)—sandy loam, sandy clay loam, or sandy clay with 10 to 40 percent brittle and hard bodies

BC horizon (if it occurs):
Color—horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8 or is mottled
Mottles—shades of red, brown, yellow, or gray
Texture (fine-earth fraction)—sandy loam, sandy clay loam, or sandy clay

Cd horizon:
Color—horizon has hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8 or is mottled
Mottles—shades of red, brown, yellow, or gray
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, sandy clay loam, or clay loam that is compact and hard in place

Badin Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves, side slopes, and nose slopes
Commonly associated soils: Goldston, Nanford, and Tarrus soils
Slope range: 2 to 25 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

Badin channery silt loam, 2 to 8 percent slopes; 1.0 mile south of U.S. Highway 74 at Polkton on Secondary Road 1250, about 1.0 mile west on Secondary Road 1247, about 0.3 mile west on a woodland road, 20 feet north of the road; Russellville USGS topographic quadrangle; lat. 34 degrees 59 minutes 45 seconds N. and long. 80 degrees 13 minutes 17 seconds W.

A—0 to 4 inches; yellowish brown (10YR 5/4) channery silt loam; moderate medium granular structure; friable; many fine and medium roots; 20 percent, by volume, slate channers; strongly acid; clear smooth boundary.
BE—4 to 8 inches; reddish yellow (7.5YR 6/6) silty clay loam; common medium faint pink (7.5YR 7/4) mottles; weak medium subangular blocky structure; friable; common fine and medium roots; 10 percent, by volume, slate channers; very strongly acid; clear smooth boundary.
Bt1—8 to 16 inches; red (2.5YR 5/8) silty clay; many coarse distinct weak red (10R 4/4) mottles; moderate medium subangular blocky structure; friable; common fine and medium roots; many distinct clay films on faces of peds; 10 percent, by volume, slate channers; very strongly acid; clear smooth boundary.
Bt2—16 to 26 inches; yellowish red (5YR 5/8) silty clay; common coarse distinct brownish yellow (10YR 6/8) and common coarse prominent weak red (10R 4/4) mottles; weak medium subangular blocky structure; friable; common fine roots; common distinct clay films on faces of peds; 10 percent, by volume, slate channers; very strongly acid; gradual wavy boundary.
BC—26 to 33 inches; yellowish red (5YR 5/6) silty clay loam; common coarse distinct olive yellow (2.5Y 6/6) and common fine prominent weak red (10R 4/4) mottles; weak coarse subangular blocky structure; friable; common fine roots; 10 percent, by volume, slate channers; very strongly acid; gradual wavy boundary.
C—33 to 38 inches; mottled red (2.5YR 5/8), yellowish red (5YR 5/6), and light gray (10YR 7/3) channery silt loam saprolite; massive; friable; few fine roots; 20 percent, by volume, slate channers; very strongly acid; gradual wavy boundary.
Cr—38 to 60 inches; weathered, partially consolidated fractured slate that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and more than 40 inches to hard bedrock
Content and size of rock fragments: 5 to less than 35 percent, by volume, in the A, E, and B horizons and 20 to 40 percent in the BC horizon; mostly channers (fig. 8)
Reaction: Strongly acid to extremely acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 8
Texture (fine-earth fraction)—silt loam or silty clay loam

E horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 or 4
Texture (fine-earth fraction)—silt loam, loam, or very fine sandy loam

BE horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture (fine-earth fraction)—silt loam, silty clay loam, or loam

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8
Texture (fine-earth fraction)—clay, silty clay, clay loam, or silty clay loam

BC horizon:
Color—horizon has hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 4 to 8 or is mottled in shades of these colors
Mottles (if they occur)—shades of red, brown, or yellow

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

C horizon:

Color—horizon has hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8 or is mottled in shades of these colors

Texture (fine-earth fraction)—silty clay loam or silt loam

Cr layer:

Type of bedrock—weathered, partially consolidated fine-grained rock of the Carolina Slate Belt that can be dug with difficulty with hand tools

R layer:

Type of bedrock—unweathered fine-grained rock of the Carolina Slate Belt

Callison Series

Depth class: Moderately deep
Drainage class: Moderately well drained
Permeability: Moderately slow
Parent material: Residuum weathered from fine-grained rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Broad upland flats, drainageways, and heads of drainageways
Landform position: Planar to slightly convex interfluves
Commonly associated soils: Badin, Goldston, Misenheimer, Nanford, and Tarrus soils
Slope range: 0 to 3 percent
Taxonomic class: Fine-silty, siliceous, semiactive, thermic Aquic Hapludults

Typical Pedon

Callison silt loam in an area of Misenheimer-Callison complex, 0 to 3 percent slopes; 5.2 miles west of Polkton on North Carolina Highway 218, about 0.1 mile southwest on Secondary Road 1443, about 0.2 mile south on Secondary Road 1411, about 200 feet east of the road, in a field; Olive Branch USGS topographic quadrangle; lat. 35 degrees 01 minute 58 seconds N. and long. 80 degrees 16 minutes 19 seconds W.

Ap—0 to 7 inches; brown (10YR 5/3) silt loam; moderate medium granular structure; friable; many fine roots; 9 percent slate channers, by volume; slightly acid; abrupt smooth boundary.

Bt1—7 to 14 inches; light yellowish brown (2.5Y 6/4) silt loam; few fine distinct yellowish brown (10YR 5/8) mottles; weak fine subangular blocky structure; friable; common fine roots; 3 percent slate channers, by volume; very strongly acid; gradual smooth boundary.

Bt2—14 to 22 inches; light olive brown (2.5Y 5/6) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; common medium distinct yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; few fine prominent light gray (10YR 7/2) irregularly shaped iron depletions; 10 percent slate channers, by volume; very strongly acid; clear wavy boundary.

BC—22 to 28 inches; light olive brown (2.5Y 5/4) channery silty clay loam; weak medium subangular blocky structure; friable; few fine roots; common medium distinct light gray (10YR 6/1) irregularly shaped iron depletions; common fine prominent yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; 34 percent slate channers, by volume; very strongly acid; abrupt wavy boundary.

Cr—28 to 55 inches; weathered fractured slate that can be dug with difficulty with hand tools; seams of light gray (10YR 6/1) masses of clay accumulation in cracks.

R—55 inches; unweathered fractured slate rock.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock (fig. 9)
Content and size of rock fragments: 0 to 10 percent, by volume, in the A and B horizons and 0 to 35 percent in the BC and C horizons; mostly channers
Reaction: Strongly acid to moderately acid in the A horizon, except where surface layers have been limed; extremely acid to moderately acid in the B, BC, and C horizons

A or Ap horizon:

Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 2 to 4

Texture (fine-earth fraction)—silt loam

E horizon (if it occurs):

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 8

Texture (fine-earth fraction)—loam or silt loam

Bt horizon:

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8

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

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown occur in the lower part of horizon

Btg horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture (fine-earth fraction)—silty clay or clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

BC horizon:
Color—horizon has hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8, or it is mottled in shades of red, yellow, brown, or gray
Texture (fine-earth fraction)—silty clay, silty clay loam, or silt loam
Redoximorphic features—iron or clay depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

BCg horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture (fine-earth fraction)—silty clay, silty clay loam, or silt loam
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

C horizon (if it occurs):
Color—horizon has hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 8, or it is mottled in shades of red, brown, yellow, or gray
Texture (fine-earth fraction)—loam or silt loam
Redoximorphic features—iron depletions in shades of gray

Cg horizon (if it occurs):
Color—hue of 10YR to 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loam or silt loam
Relict redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

Cr layer:
Type of bedrock—weathered fractured Carolina slate or other fine-grained rock, partially consolidated, that can be dug with difficulty with a spade

R layer:
Type of bedrock—unweathered Carolina slate or other fine-grained rock

Candor Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Parent material: Sandy and loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Convex interfluves, side slopes, and nose slopes
Commonly associated soils: Ailey, Emporia, Fuquay, Pelion, and Wakulla soils
Slope range: 1 to 15 percent
Taxonomic class: Sandy, siliceous, thermic Arenic Paleudults

Typical Pedon

Candor sand, 1 to 8 percent slopes; 8 miles south of Wadesboro on North Carolina Highway 742 to Cason Old Field, 0.4 mile east on North Carolina Highway 1003, about 200 feet north in woods; Morven West USGS topographic quadrangle; lat. 34 degrees 50 minutes 24 seconds N. and long. 80 degrees 05 minutes 13 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) sand; single grain; loose; many medium and coarse roots; strongly acid; abrupt smooth boundary.
E—7 to 27 inches; light yellowish brown (10YR 6/4) sand; single grain; loose; many medium and coarse roots; very strongly acid; clear smooth boundary.
Bt—27 to 39 inches; yellowish brown (10YR 5/8) loamy sand; weak medium subangular blocky structure; very friable; common medium roots; very strongly acid; gradual smooth boundary.
E´1—39 to 50 inches; brownish yellow (10YR 6/6) sand; single grain; loose; common medium roots; very strongly acid; gradual smooth boundary.
E´2—50 to 58 inches; yellow (10YR 7/6) sand; common medium prominent strong brown (7.5YR 5/8) mottles; single grain; loose; few medium roots; very strongly acid; gradual smooth boundary.
Bt´1—58 to 75 inches; strong brown (7.5YR 5/8) sandy loam; common medium distinct brownish yellow (10YR 6/6) mottles; weak medium subangular blocky structure; very friable; very strongly acid; gradual smooth boundary.
Bt´2—75 to 80 inches; strong brown (7.5YR 5/8) sandy clay loam; common coarse distinct light gray (10YR 7/2) mottles; weak medium subangular blocky structure; very friable; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 80 inches
Content of mica flakes: None to common in the B and C horizons

Content and size of rock fragments: 0 to 5 percent, by volume, in the A, E, and Bt horizons and 0 to 30 percent in the E´, B´t, BC, and C horizons; mostly gravel
Reaction: Strongly acid to extremely acid throughout the profile, except where surface layers have been limed

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3; where value is 3, horizon is less than 6 inches thick
Texture—sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sand

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—loamy sand

E´ horizon:
Color—horizon has hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 3 to 8 or is mottled in these colors
Texture—sand or loamy sand

Bw or B/E horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sand or loamy sand

B´t horizon:
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8
Mottles—shades of yellow, brown, red, gray, or white
Texture—sandy loam, sandy clay loam, or sandy clay

BC horizon (if it occurs):
Color—hue of 2.5YR to 7.5YR, value of 6 to 8, and chroma of 4 to 8
Mottles—shades of yellow, brown, red, gray, or white
Texture—sandy loam to clay

C horizon (if it occurs):
Color—hue of 2.5YR to 7.5YR, value of 6 to 8, and chroma of 4 to 8
Mottles—shades of yellow, brown, red, gray, or white
Texture—sandy loam to clay

Carbonton Series

Depth class: Moderately deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Residuum weathered from Triassic sandstone, mudstone, siltstone, shale, or conglomerate
Landscape: Triassic Basin
Landform: Narrow ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Creedmoor, Granville, Iredell, Mayodan, Polkton, Wadesboro, and White Store soils
Slope range: 2 to 30 percent
Taxonomic class: Fine, mixed, semiactive, thermic Oxyaquic Hapludalfs

Typical Pedon

Carbonton fine sandy loam in an area of Pinoka-Carbonton complex, 2 to 8 percent slopes; 3.5 miles north of Wadesboro on North Carolina Highway 109, about 0.6 mile east on Secondary Road 1711, about 0.2 mile north on a woodland road, 50 feet south of the road, in woods; Ansonville USGS topographic quadrangle; lat. 35 degrees 00 minutes 39 seconds N. and long. 80 degrees 00 minutes 57 seconds W.

A—0 to 5 inches; brown (7.5YR 5/4) fine sandy loam; weak coarse granular structure; friable; many fine and medium roots; very strongly acid; abrupt smooth boundary.
Bt—5 to 20 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; common fine roots; common distinct clay films on faces of peds; very strongly acid; clear smooth boundary.
BC—20 to 28 inches; red (2.5YR 4/8) clay loam; weak coarse subangular blocky structure; firm; many fine and medium roots; many coarse faint reddish brown (2.5YR 5/4) irregularly shaped masses of iron accumulation; very strongly acid; clear smooth boundary.
Cr—28 to 60 inches; weathered, partially consolidated siltstone that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock
Content and size of rock fragments: 0 to 60 percent, by volume, in any horizon but average of less than

35 percent throughout the profile; mostly siltstone and mudstone gravel
Reaction: Extremely acid to strongly acid throughout the profile, except where surface layers have been limed

A horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 6
Texture (fine-earth fraction)—fine sandy loam

Ap horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 6
Texture (fine-earth fraction)—loamy sand, fine sandy loam, sandy loam, loam, very fine sandy loam, or silt loam

E horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, very fine sandy loam, or silt loam

BE horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, very fine sandy loam, or silt 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, clay, silty clay loam, or silty clay
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown; at a depth of 40 inches or more

BC horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—silty clay loam, clay loam, loam, or silt loam
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown; at a depth of 40 inches or more

C horizon (if it occurs):
Color—hue of 2.5YR to 10YR, value of 3 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—silty clay loam, clay loam, loam, or silt loam saprolite
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of yellow or brown; at a depth of 40 inches or more

Cr layer:
Type of bedrock—weathered, partially consolidated sandstone, siltstone, mudstone, shale, or conglomerate which can be dug with difficulty with hand tools

R layer (if it occurs):
Type of bedrock—unweathered sandstone, siltstone, mudstone, shale, or conglomerate

Cecil Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from felsic high-grade metamorphic or igneous rock
Landscape: Piedmont uplands
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves, side slopes, and nose slopes
Commonly associated soils: Hiwassee and Pacolet soils
Slope range: 2 to 15 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded; 1 mile south of U.S. Highway 74 on North Carolina Highway 52, about 1 mile east on Secondary Road 1816, about 0.3 mile east on an unpaved road, 50 feet north in woods; Wadesboro USGS topographic quadrangle; lat. 34 degrees 57 minutes 21 seconds N. and long. 80 degrees 02 minutes 42 seconds W.

Ap—0 to 6 inches; brown (7.5YR 5/4) sandy clay loam; weak medium granular structure; friable; many medium roots; very strongly acid; abrupt smooth boundary.
Bt1—6 to 15 inches; red (2.5YR 5/8) clay; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; common medium roots; few distinct clay films on faces of peds; very strongly acid; clear smooth boundary.
Bt2—15 to 30 inches; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; friable; slightly sticky and slightly plastic; few medium

roots; few fine flakes of mica; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt3—30 to 36 inches; red (2.5YR 4/8) clay; few medium prominent reddish yellow (7.5YR 6/8) mottles; moderate fine subangular blocky structure; friable; slightly sticky and slightly plastic; few fine flakes of mica; few distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

BC—36 to 48 inches; red (2.5YR 5/6) clay loam; weak coarse subangular blocky structure; friable; common fine flakes of mica; strongly acid; gradual wavy boundary.

C—48 to 62 inches; light red (2.5YR 6/8) loam saprolite; many medium prominent reddish yellow (7.5YR 6/8) mottles; massive; friable; common fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 72 inches
Content of mica flakes: Few or common in the B horizon and few to many in the C horizon
Content and size of rock fragments: 0 to 5 percent throughout the profile; mostly gravel
Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 8; where value is 3, horizon is less than 6 inches thick
Texture—sandy clay loam

E horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, or loam

BA or BE horizon (if it occurs):
Color—hue of 2.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay loam, loam, or clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma of 6 or 8
Texture—clay, clay loam, or sandy clay

BC horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8
Mottles (if they occur)—shades of yellow or brown
Texture—clay loam, sandy clay loam, or loam

C horizon:
Color—horizon has hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8 or is multicolored
Texture—loamy saprolite

Chastain Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Recent alluvial sediments
Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Commonly associated soils: Chewacla, Hornsboro, Riverview, Roanoke, and Shellbluff soils
Slope range: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts

Typical Pedon

Chastain silt loam in an area of Chewacla and Chastain soils, 0 to 2 percent slopes, frequently flooded; 0.6 mile south of Polkton on Secondary Road 1250, about 150 feet west of the road, 300 feet north of the southern edge of the flood plain, in woods; Russellville USGS topographic quadrangle; lat. 34 degrees 59 minutes 23 seconds N. and long. 80 degrees 12 minutes 12 seconds W.

A—0 to 6 inches; brown (10YR 5/3) loam; weak coarse granular structure; very friable; many fine roots; common fine pores; common medium prominent brownish yellow (10YR 6/6) irregularly shaped masses of iron accumulation and common medium prominent light brownish gray (10YR 6/2) irregularly shaped iron depletions; very strongly acid; abrupt smooth boundary.

Bg1—6 to 16 inches; light gray (10YR 6/1) silty clay loam; weak coarse subangular blocky structure; firm; many fine roots; common medium prominent brownish yellow (10YR 6/6) irregularly shaped masses of iron accumulation; few fine prominent very dark gray (10YR 3/1) organic stains; very strongly acid; clear smooth boundary.

Bg2—16 to 28 inches; light gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; common fine roots; common medium prominent yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation; few fine prominent very dark gray (10YR 3/1) organic stains; slightly acid; gradual smooth boundary.

Bg3—28 to 47 inches; light gray (10YR 6/1) clay; weak medium subangular blocky structure; few fine roots; many medium prominent yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; moderately alkaline; gradual smooth boundary.

Cg—47 to 60 inches; light brownish gray (10YR 6/2) clay; massive; firm; many coarse prominent yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; common fine black manganese concretions; moderately alkaline.

Range in Characteristics

Thickness of the solum: 25 to more than 72 inches
Depth to bedrock: More than 60 inches
Reaction: Extremely acid to moderately acid in the A horizon and the upper part of the B horizon and slightly acid to moderately alkaline in the lower part of the B horizon and in the C horizon

A horizon:
Color—horizon has hue of 7.5YR to 5Y or is neutral in hue, has value of 4 to 6, and has chroma of 0 to 6
Texture—loam
Redoximorphic features—masses of iron accumulation in shades of yellow or brown

Bg horizon:
Color—horizon has hue of 10YR to 5GY or is neutral in hue, has value of 4 to 7, and has chroma of 0 or 2
Texture—silty clay, clay, silty clay loam, or clay loam
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

Cg horizon:
Color—horizon has hue of 10YR to 5GY or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—silty clay, clay, clay loam, silty clay loam, or sandy clay loam
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

2Cg horizon (if it occurs):
Color—horizon has hue of 10YR to 5GY or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—variable; sandy to loamy
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

The Chastain soils in Anson County are considered taxadjuncts to the Chastain series because the soil reaction is more alkaline than that defined as the range of the official series.

Chewacla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Recent alluvial sediments
Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Commonly associated soils: Chastain, Hornsboro, Riverview, and Shellbluff soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts

Typical Pedon

Chewacla loam, 0 to 2 percent slopes, frequently flooded; 3 miles north of Wadesboro, 1.4 miles northwest of U.S. Highway 52 on Secondary Road 1641, about 500 feet east of the road and 600 feet east of Goulds Fork Creek; Ansonville USGS topographic quadrangle; lat. 35 degrees 01 minute 05 seconds N. and long. 80 degrees 06 minutes 10 seconds W.

Ap—0 to 6 inches; brown (7.5YR 4/4) loam; moderate medium granular structure; friable; common fine roots; few fine flakes of mica; slightly acid; clear smooth boundary.

BA—6 to 14 inches; brown (7.5YR 5/4) silty clay loam; weak coarse subangular blocky structure; friable; common fine roots; few fine and medium black manganese concretions; few fine flakes of mica; slightly acid; gradual smooth boundary.

Bw—14 to 22 inches; dark yellowish brown (10YR 4/4) sandy clay loam; weak coarse subangular blocky structure; friable; few fine roots; common fine distinct dark gray (10YR 4/1) irregularly shaped iron depletions; common fine distinct black manganese concretions; few fine flakes of mica; moderately acid; gradual smooth boundary.

Bg—22 to 50 inches; light brownish gray (10YR 6/2) clay loam; weak medium subangular blocky structure; friable; few fine roots; many medium prominent brownish yellow (10YR 6/8) and brown (10YR 5/3) irregularly shaped masses of iron accumulation; common fine distinct black manganese concretions; few fine flakes of mica; moderately acid; gradual smooth boundary.

Cg—50 to 60 inches; light brownish gray (10YR 6/2) loamy fine sand; massive; very friable; many coarse distinct yellowish red (5YR 5/6) and brown (7.5YR 5/4) irregularly shaped masses of iron accumulation; few fine flakes of mica; moderately acid.

Range in Characteristics

Thickness of the solum: 15 to 70 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: Few or common throughout the profile
Content of concretions: None to common throughout the profile
Reaction: Very strongly acid to slightly acid to a depth of 40 inches, except where surface layers have been limed, and very strongly acid to slightly alkaline below a depth of 40 inches

A or Ap horizon:
Color—hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 1 to 6
Texture—loam

BA horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—loam, silt loam, clay loam, sandy 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, silty clay loam, clay loam, silt loam, sandy loam, loam, or fine sandy loam
Redoximorphic features—iron depletions in shades of gray are within a depth of 24 inches; masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

Bg horizon:
Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 or 2
Texture—sandy clay loam, silty clay loam, clay loam, silt loam, sandy loam, loam, or fine sandy loam
Redoximorphic features—masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

BC horizon (if it occurs):
Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy clay loam, silty clay loam, clay loam, silt loam, sandy loam, loam, or fine sandy loam
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

BCg horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 0 to 2
Texture—sandy clay loam, silty clay loam, clay loam, silt loam, sandy loam, loam, or fine sandy loam
Redoximorphic features—masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

C horizon (if it occurs):
Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—loamy within a depth of 40 inches and variable below a depth of 40 inches
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

Cg horizon (if it occurs):
Color—hue of 10YR to 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—loamy within a depth of 40 inches and variable below a depth of 40 inches
Redoximorphic features—masses of iron accumulation (if they occur) in shades of brown, yellow, or red are throughout horizon

Claycreek Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderately slow
Parent material: Residuum weathered from Triassic sandstone, mudstone, siltstone, or shale
Landscape: Triassic Basin
Landform: Broad upland flats
Landform position: Interfluves
Commonly associated soils: Creedmoor, Iredell, Mayodan, Polkton, and White Store soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-silty, siliceous, semiactive, thermic Oxyaquic Hapludalfs

Typical Pedon

Claycreek fine sandy loam, 0 to 2 percent slopes; 3 miles south of White Store on Secondary Road 1228, about 2.5 miles south on Secondary Road 1226, about 0.4 mile east of Secondary Road 1220, about 100 feet west in a field; Hornsboro USGS topographic quadrangle; lat. 34 degrees 49 minutes 41 seconds N. and long. 80 degrees 17 minutes 37 seconds W.

Ap—0 to 8 inches; brown (10YR 5/3) fine sandy loam; weak medium granular structure; very friable; few fine roots; 2 percent rounded pebbles, by volume; neutral; abrupt smooth boundary.

Bt1—8 to 17 inches; yellow (10YR 7/6) silt loam; weak medium subangular blocky structure; friable; common fine roots; common medium faint brownish yellow (10YR 6/8) irregularly shaped masses of iron accumulation; 2 percent rounded gravel, by volume; very strongly acid; gradual wavy boundary.

Bt2—17 to 32 inches; brownish yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; common fine roots; common medium distinct light gray (10YR 7/1) irregularly shaped iron depletions; common distinct clay films in pores; 2 percent rounded gravel, by volume; extremely acid; gradual wavy boundary.

Bt3—32 to 47 inches; yellowish brown (10YR 5/8) clay loam; moderate medium subangular blocky structure; friable; few fine roots; many coarse distinct light gray (10YR 7/1) irregularly shaped iron depletions; few distinct clay films in pores; 2 percent rounded gravel, by volume; extremely acid; gradual wavy boundary.

Btg—47 to 54 inches; light gray (10YR 7/1) clay loam; weak coarse subangular blocky structure; firm; few fine roots; common medium distinct yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; few distinct clay films in pores; 2 percent rounded gravel, by volume; extremely acid; gradual wavy boundary.

Cg—54 to 75 inches; light gray (10YR 7/1) sandy clay loam saprolite; massive; friable; brown (10YR 5/8) irregularly shaped masses of iron accumulation; 5 percent rounded gravel, by volume; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 5 percent, by volume, in the A, E, and B horizons and 0 to 20 percent in the BC and C horizons; mostly gravel
Reaction: Extremely acid to moderately acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 6
Texture—fine sandy loam

E horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 to 4
Texture—fine sandy loam, loam, or silt loam

Bt horizon:
Color—horizon has hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8 or is mottled in these colors
Texture—silt loam, silty clay loam, or clay loam
Redoximorphic features—iron depletions in shades of gray occur within 24 inches of the top of the Bt horizon; masses of iron accumulation in shades of red, yellow, or brown

Btg horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—clay loam, silty clay loam, or silty clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BC horizon (if it occurs):
Color—horizon has hue of 7.5YR to 2.5Y and value and chroma of 3 to 8 or is mottled in shades of these colors
Texture—silt loam, silty clay loam, sandy clay loam, or clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

BCg horizon (if it occurs):
Color—horizon has hue of 7.5YR to 2.5Y, value of 3 to 8, and chroma of 1 or 2 or is mottled in shades of these colors
Texture—silt loam, silty clay loam, sandy clay loam, or clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

C horizon (if it occurs):
Color—horizon has hue of 10R to 2.5Y and value and chroma of 3 to 8 or is mottled in shades of these colors
Texture—sandy loam, loam, silt loam, clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Cg horizon:
Color—horizon has hue of 10R to 2.5Y, value of 3

to 8, and chroma of 1 or 2 or is mottled in shades of these colors
Texture—sandy loam, loam, silt loam, clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Creedmoor Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Very slow
Parent material: Residuum weathered from fine-grained sandstone, mudstone, siltstone, or shale
Landscape: Triassic Basin
Landform: Broad ridges
Landform position: Interfluves
Commonly associated soils: Claycreek, Granville, Iredell, Mayodan, Polkton, and White Store soils
Slope range: 2 to 8 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aquic Hapludults

Typical Pedon

Creedmoor fine sandy loam, 2 to 8 percent slopes; 4.5 miles north of Wadesboro on U.S. Highway 52, about 0.4 mile west on a farm road from U.S. Highway 52 at Secondary Road 1648, about 30 feet north of the road; Ansonville USGS topographic quadrangle; lat. 35 degrees 01 minute 56 seconds N. and long. 80 degrees 05 minutes 51 seconds W.

Ap—0 to 8 inches; yellowish brown (10YR 5/4) fine sandy loam; moderate medium granular structure; friable; many fine roots; very strongly acid; abrupt smooth boundary.
Bt1—8 to 18 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; many fine roots; many medium distinct very pale brown (10YR 7/3) irregularly shaped iron depletions; extremely acid; clear smooth boundary.
Bt2—18 to 33 inches; yellowish brown (10YR 5/8) clay; weak coarse subangular blocky structure; very firm; very sticky and very plastic; few fine roots; common fine distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions; very strongly acid; clear smooth boundary.
Btg—33 to 42 inches; light gray (10YR 6/1) clay; weak coarse subangular blocky structure; extremely firm; very sticky and very plastic; few fine roots; many fine prominent yellowish brown (10YR 5/8) and common medium distinct reddish brown (5YR 4/4) irregularly shaped masses of iron accumulation; common distinct clay films on faces of peds; very strongly acid; gradual smooth boundary.
C—42 to 62 inches; dark reddish brown (5YR 3/4) sandy clay loam saprolite; massive; friable; common fine prominent light gray (10YR 6/1) irregularly shaped iron depletions; very strongly acid; clear smooth boundary.
Cr—62 to 65 inches; weathered Triassic siltstone that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 25 to 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: Less than 5 percent in the A and B horizons; mostly fine-grained sandstone and mudstone pebbles
Reaction: Strongly acid to extremely acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 6
Texture—fine sandy loam

E horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loam, silt loam, loamy sand, or coarse sandy loam

BE horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 4 to 6
Texture—sandy loam, loam, silt loam, sandy clay loam, or silty clay loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sandy clay loam, sandy clay, clay loam, silty clay loam, silty clay, or clay
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Btg horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam, sandy clay, clay loam, silty clay loam, silty clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

BC horizon (if it occurs):
Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—sandy clay loam, clay loam, sandy clay, silty clay loam, or silty clay
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

BCg horizon (if it occurs):
Color—horizon has hue of 2.5YR to 2.5Y or is neutral in hue, has value of 4 to 8, and has chroma of 1 or 2, or it is mottled in shades of these colors
Texture—sandy clay loam, clay loam, sandy clay, silty clay loam, or silty clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

C horizon:
Color—hue of 10R to 2.5Y and value and chroma of 3 to 8
Texture—silt loam, loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, silty clay loam, silty clay, or sandy clay saprolite
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Cg horizon (if it occurs):
Color—horizon has hue of 10R to 2.5Y or is neutral in hue, has value of 3 to 8, and has chroma of 1 or 2
Texture—silt loam, loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, silty clay loam, silty clay, or sandy clay saprolite
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Cr layer:
Type of bedrock—weathered sandstone, mudstone, or siltstone that can be dug with difficulty with hand tools

R layer (if it occurs):
Type of bedrock—unweathered Triassic rock

Dothan Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad upland flats
Landform position: Interfluves
Commonly associated soils: Ailey, Emporia, Fuquay, Lillington, and Pelion soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Plinthic Kandiudults

Typical Pedon

Dothan loamy sand, 0 to 2 percent slopes; 4.2 miles south of Morven on North Carolina Highway 145, about 1.2 miles east on Secondary Road 1003, about 0.4 mile south on Secondary Road 1832, about 50 feet west of the road, in a field; Morven West USGS topographic quadrangle; lat. 34 degrees 49 minutes 06 seconds N. and long. 80 degrees 00 minutes 42 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) loamy sand; weak medium granular structure; very friable; many fine roots; 3 percent fine rounded iron concretions; moderately acid; abrupt smooth boundary.
E—8 to 12 inches; light yellowish brown (10YR 6/4) loamy sand; weak medium granular structure; very friable; common fine roots; 3 percent fine rounded iron concretions; strongly acid; clear smooth boundary.
Bt1—12 to 28 inches; brownish yellow (10YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
Bt2—28 to 40 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common medium distinct yellowish red (5YR 5/8) masses of iron accumulation; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
Btv1—40 to 50 inches; sandy clay loam with reticulate pattern of brownish yellow (10YR 6/6), yellowish red (5YR 5/8), and light gray (10YR 7/1); weak medium subangular blocky structure; firm; 10 percent plinthite nodules; yellowish red areas are masses of iron accumulation and light gray areas are iron depletions; very strongly acid; gradual smooth boundary.
Btv2—50 to 64 inches; sandy clay loam with reticulate pattern of brownish yellow (10YR 6/6), yellowish red (5YR 5/8), and light gray (10YR 7/1); weak thick platy structure; firm; 10 percent plinthite nodules; 10 percent hard iron nodules; yellowish red areas are masses of iron accumulation and light gray areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: Less than 15 percent, by volume, throughout the profile; mostly gravel and 1- to 8-inch-sized ironstone
Content of plinthite: 5 percent or more, by volume, at depths of 24 to 60 inches
Reaction: Moderately acid to very strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—loamy sand

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 fine sand, loamy sand, or sand

BE horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 4 to 8
Texture—sandy clay loam, sandy loam, or fine sandy loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Btv horizon:
Color—horizon has hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 4 to 8, or it has a reticulate pattern in shades of red, yellow, brown, or gray
Texture—sandy clay loam, clay loam, or sandy clay
Content of plinthite—5 to 35 percent, by volume
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Emporia Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow or slow
Parent material: Loamy and clayey marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves, side slopes, and nose slopes
Commonly associated soils: Ailey, Dothan, Fuquay, Lillington, Pelion, and Vaucluse soils
Slope range: 2 to 10 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Emporia loamy sand, 2 to 6 percent slopes; 1.7 miles south of U.S. Highway 74 in Wadesboro on North Carolina Highway 52, about 250 feet west of North Carolina Highway 52; Wadesboro USGS topographic quadrangle; lat. 34 degrees 56 minutes 37 seconds N. and long. 80 degrees 03 minutes 12 seconds W.

Ap—0 to 7 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; many fine roots; 5 percent fine rounded quartz gravel; very strongly acid; abrupt smooth boundary.
E—7 to 14 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; many fine roots; 5 percent fine rounded quartz gravel; very strongly acid; clear smooth boundary.
Bt1—14 to 36 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; few faint clay films on faces of peds; 2 percent fine rounded quartz gravel; very strongly acid; gradual smooth boundary.
Bt2—36 to 48 inches; yellowish brown (10YR 5/8) clay loam; weak coarse subangular blocky structure; firm; few fine roots; common medium distinct light gray (10YR 7/1) irregularly shaped iron depletions and many medium prominent red (2.5YR 5/8) irregularly shaped masses of iron accumulation; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
C—48 to 62 inches; yellowish brown (10YR 5/6), red (2.5YR 5/8), and light gray (10YR 7/1) sandy clay loam; massive; friable; red areas are masses of iron accumulation and light gray areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 75 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common
Content and size of rock fragments: Less than 15 percent, by volume, throughout the profile; mostly gravel and 1- to 8-inch-sized ironstone
Reaction: Moderately acid to very strongly acid, except where surface layers have been limed

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 2 to 4
Texture—loamy sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BE horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam, fine sandy loam, or loam

Bt horizon (upper part):
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown; below a depth of 36 inches

Bt horizon (lower part):
Color—horizon has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8 or is mottled
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Btg horizon (if it occurs):
Color—horizon has hue of 5YR to 2.5Y or is neutral in hue, has value of 4 to 6, and has chroma of 0 to 2
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

BC horizon (if it occurs):
Color—horizon has hue of 2.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8, or it is mottled in shades of these colors
Texture—sandy loam, coarse sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

BCg horizon (if it occurs):
Color—horizon has hue of 2.5YR to 2.5Y or is neutral in hue, has value of 4 to 6, and has chroma of 0 to 2
Texture—sandy loam, coarse sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

C horizon:
Color—horizon has hue of 2.5YR to 5Y and value and chroma of 3 to 8, or it is multicolored
Texture—sandy loam to clay
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Cg horizon (if it occurs):
Color—horizon has hue of 5YR to 5Y or is neutral in hue, has value of 3 to 8, and has chroma of 0 to 2
Texture—sandy loam to clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown

Fuquay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate in the upper part of the profile and slow in the lower part
Parent material: Sandy and loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad upland flats
Landform position: Interfluves
Commonly associated soils: Ailey, Candor, Dothan, Emporia, Lillington, and Wakulla soils
Slope range: 0 to 3 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults

Typical Pedon

Fuquay loamy sand, 0 to 3 percent slopes; 3.0 miles south of Wadesboro on North Carolina Highway 742, about 0.5 mile east on Secondary Road 1128, about 100 yards south on Madison Grove Church Drive, about 100 feet east of the church, in a peach orchard; Wadesboro USGS topographic quadrangle; lat. 34 degrees 53 minutes 18 seconds N. and long. 80 degrees 04 minutes 40 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; many fine roots; slightly acid; abrupt smooth boundary.

E—7 to 24 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; very friable; many fine roots; 3 percent gravel; moderately acid; clear smooth boundary.

Bt1—24 to 28 inches; brownish yellow (10YR 6/6) sandy loam; weak medium subangular blocky structure; friable; common fine roots; 3 percent gravel; strongly acid; clear smooth boundary.

Bt2—28 to 40 inches; brownish yellow (10YR 6/6) sandy clay loam; weak coarse subangular blocky structure; friable; common fine roots; many coarse distinct yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; few fine iron concretions; few faint clay films on faces of peds; 6 percent gravel; very strongly acid; gradual smooth boundary.

Btv1—40 to 48 inches; sandy clay loam with reticulate pattern of light yellowish brown (10YR 6/4), strong brown (7.5YR 5/8), and yellowish red (5YR 4/6); weak coarse subangular blocky structure; friable; common fine roots; strong brown and yellowish red areas are masses of iron accumulation; common faint clay films on faces of peds; 10 percent plinthite nodules; very strongly acid; gradual smooth boundary.

Btv2—48 to 65 inches; sandy clay loam with reticulate pattern of yellowish red (5YR 5/8), strong brown (7.5YR 5/8), and light gray (10YR 7/2); weak coarse subangular blocky structure; friable; yellowish red areas are masses of iron accumulation and light gray areas are iron depletions; 15 percent plinthite nodules; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.

C—65 to 75 inches; sandy loam with reticulate pattern of red (2.5YR 4/8), brownish yellow (10YR 6/6), and light gray (10YR 7/1); massive; friable; red areas are masses of iron accumulation and light gray areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches

Depth to bedrock: More than 60 inches

Content and size of rock fragments: Less than 15 percent, by volume, throughout the profile; mostly gravel and 1- to 8-inch-sized ironstone

Content of plinthite: 5 percent or more, by volume, at depths of 35 to 60 inches

Reaction: Moderately acid to very strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:

Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 4 or 5, and has chroma of 0 to 3

Texture—loamy sand

E horizon:

Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6

Texture—loamy sand, loamy fine sand, fine sand, or sand

BE horizon (if it occurs):

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 8

Texture—sandy loam or loamy sand

Bt horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or fine sandy loam

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Btc horizon (if it occurs):

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8

Texture—sandy clay loam, sandy loam, or fine sandy loam

Content of nodules—more than 5 percent, by volume

Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Btv horizon:

Color—hue of 10R to 10YR, value of 4 to 8, and chroma of 1 to 8

Content of plinthite—more than 5 percent, by volume

Texture—sandy clay loam, sandy loam, or fine sandy loam

Redoximorphic features—reticulate pattern of masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

C horizon:

Color—variegated colors with hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8

Texture—sandy loam or loamy sand

Redoximorphic features—reticulate pattern of masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Georgeville Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from schist and other fine-grained metamorphic rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Broad ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Badin, Cecil, Nanford, Pacolet, and Tarrus soils
Slope range: 2 to 15 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Georgeville silty clay loam, 2 to 8 percent slopes, moderately eroded; 12 miles south of Wadesboro on North Carolina Highway 109, about 600 feet east on a woodland road, 50 feet west of the road; Mt. Croghan USGS topographic quadrangle; lat. 34 degrees 49 minutes 59 seconds N. and long. 80 degrees 11 minutes 20 seconds W.

Ap—0 to 4 inches; yellowish red (5YR 4/6) silty clay loam; weak coarse subangular blocky structure; friable; common medium and coarse roots; very strongly acid; abrupt smooth boundary.
Bt1—4 to 20 inches; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; friable; common medium and coarse roots; very strongly acid; clear smooth boundary.
Bt2—20 to 36 inches; red (2.5YR 4/8) clay; many medium distinct reddish brown (2.5YR 5/4) mottles; moderate medium subangular blocky structure; friable; few medium roots; very strongly acid; clear smooth boundary.
BC—36 to 42 inches; red (2.5YR 4/8) silty clay loam; many coarse distinct reddish brown (2.5YR 5/4) mottles; weak coarse subangular blocky structure; friable; very strongly acid; clear smooth boundary.
C—42 to 68 inches; reddish brown (2.5YR 5/4) loam saprolite; massive; very friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None or few in the lower part of the solum
Content and size of rock fragments: 0 to 20 percent, by volume, in the A and E horizons and 0 to 10 percent in the B and C horizons; mostly gravel
Reaction: Very strongly acid to neutral in the A horizon and very strongly acid or strongly acid in the B and C horizons

A horizon:
Color—horizon has hue of 2.5YR to 7.5YR or is neutral in hue, has value of 4 or 5, and has chroma of 4 to 8
Texture (fine-earth fraction)—silty clay loam

E horizon (if it occurs):
Color—hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 3 to 8
Texture—silt loam, loam, sandy loam, fine sandy loam, or very fine sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 or 8
Texture—clay loam, silty clay loam, silty clay, or clay

Bt horizon (lower part):
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma of 6 or 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture—clay loam, silty clay loam, silty clay, or clay

BC horizon:
Color—hue of 10R to 5YR, value of 4 to 6, and chroma of 6 or 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture—silt loam, loam, silty clay loam, or clay loam

C horizon:
Color—hue of 10R to 10YR, value of 4 to 6, and chroma of 3 to 8
Mottles (if they occur)—shades of yellow, brown, gray, or red
Texture—silt loam, loam, very fine sandy loam, fine sandy loam, sandy loam, or silty clay loam

Goldston Series

Depth class: Shallow
Drainage class: Well drained
Permeability: Moderately rapid
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Interfluves, side slopes, and nose slopes

Commonly associated soils: Badin, Callison, Misenheimer, Nanford, and Tarrus soils
Slope range: 2 to 45 percent
Taxonomic class: Loamy-skeletal, siliceous, semiactive, thermic, shallow Typic Dystrudepts

Typical Pedon

Goldston channery silt loam, 2 to 8 percent slopes; 2 miles northeast of Peachland, 100 yards west of the intersection of Secondary Roads 1415 and 1417, about 100 feet east of Secondary Road 1417, in a field; Polkton USGS topographic quadrangle; lat. 35 degrees 00 minutes 37 seconds N. and long. 80 degrees 14 minutes 16 seconds W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) channery silt loam; weak medium granular structure; friable; many fine roots; moderately acid; abrupt smooth boundary.
E—5 to 9 inches; pale brown (10YR 6/3) channery silt loam; weak medium granular structure; friable; common fine roots; strongly acid; clear wavy boundary.
Bw—9 to 15 inches; yellowish brown (10YR 5/4) very channery silt loam; weak medium subangular blocky structure; friable; common fine roots; very strongly acid; gradual wavy boundary.
Cr—15 to 23 inches; weathered, highly fractured slate that can be dug with difficulty with hand tools.
R—23 inches; unweathered, slightly fractured slate.

Range in Characteristics

Thickness of the solum: 10 to 20 inches
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to 40 inches or more to hard bedrock (fig. 10)
Content and size of rock fragments: 15 to 60 percent, by volume, in the A, Ap, and E horizons and more than 35 percent in the Bw and C horizons; mostly channers
Reaction: Extremely acid to moderately acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture (fine-earth fraction)—silt loam

E horizon:
Color—hue of 10YR to 2.5Y, value of 4 to 7, and chroma of 2 to 6
Texture (fine-earth fraction)—silt loam or very fine sandy loam

Bw horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Mottles (if they occur)—shades of brown, yellow, or red
Texture (fine-earth fraction)—silt loam or very fine sandy loam

Cr layer:
Type of bedrock—weathered, partially consolidated fine-grained rock of the Carolina Slate Belt that can be dug with difficulty with hand tools

R layer:
Type of bedrock—unweathered fine-grained rock of the Carolina Slate Belt

Granville Series

Depth class: Very deep (fig. 11)
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from Triassic sandstone, mudstone, and siltstone
Landscape: Triassic Basin
Landform: Broad ridges
Landform position: Interfluves
Commonly associated soils: Claycreek, Creedmoor, Iredell, Mayodan, and Pinoka soils
Slope range: 2 to 8 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Hapludults

Typical Pedon

Granville sandy loam, 2 to 8 percent slopes; 1.5 miles east of U.S. Highway 52 on North Carolina Highway 1634, about 0.2 mile south on a farm road, 200 feet southeast in a field; Ansonville USGS topographic quadrangle; lat. 35 degrees 05 minutes 28 seconds N. and long. 80 degrees 05 minutes 25 seconds W.

Ap—0 to 8 inches; yellowish brown (10YR 5/4) sandy loam; weak medium granular structure; very friable; few fine roots; 5 percent rounded quartz gravel; slightly acid; clear smooth boundary.
E—8 to 11 inches; brownish yellow (10YR 6/6) sandy loam; weak medium granular structure; very friable; few fine roots; 5 percent rounded quartz gravel; slightly acid; clear wavy boundary.
Bt1—11 to 19 inches; yellowish brown (10YR 5/8) sandy clay loam; common fine distinct yellowish red (5YR 5/8) and few fine distinct strong brown

(7.5YR 5/6) mottles; weak medium subangular blocky structure; friable; few fine roots; 2 percent rounded quartz gravel; moderately acid; gradual wavy boundary.

Bt2—19 to 31 inches; yellowish brown (10YR 5/8) clay loam; common medium distinct red (2.5YR 4/8) mottles; moderate medium subangular blocky structure; friable; few fine roots; 2 percent rounded quartz gravel; very strongly acid; gradual wavy boundary.

Bt3—31 to 48 inches; yellowish brown (10YR 5/8) clay loam; common medium prominent red (2.5YR 4/8) and common medium distinct light yellowish brown (10YR 6/4) mottles; moderate medium subangular blocky structure; friable; few fine roots; 2 percent rounded quartz gravel; very strongly acid; gradual wavy boundary.

BC—48 to 53 inches; mottled yellowish brown (10YR 5/8), red (10R 4/8), very pale brown (10YR 7/4), light gray (10YR 7/2), and strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; friable; about 5 percent rounded quartz gravel; very strongly acid; gradual wavy boundary.

C—53 to 64 inches; mottled red (10R 5/8), strong brown (7.5YR 5/6), pinkish white (7.5YR 8/2), and brownish yellow (10YR 6/6) gravelly clay loam saprolite; massive; friable; 20 percent rounded quartz gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: Less than 35 percent, by volume, throughout the profile; mostly gravel
Reaction: Strongly acid or very strongly acid throughout the profile, except where surface layers have been limed

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)—sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 2 to 8
Texture (fine-earth fraction)—fine sandy loam, sandy loam, coarse sandy loam, or loamy sand

BE or BA horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, or sandy clay loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Mottles—shades of red, yellow, or brown
Texture (fine-earth fraction)—sandy clay loam or clay loam

BC horizon:
Color—horizon has hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8, or it is mottled in shades of these colors
Mottles—shades of red, yellow, or brown
Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, or clay loam

C horizon:
Color—multicolored in shades of red, yellow, and brown
Texture (fine-earth fraction)—sandy loam, loam, sandy clay loam, or clay loam

Hiwassee Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Old alluvium
Landscape: Piedmont
Landform: High stream terraces and hillslopes of high stream terraces
Landform position: Head slopes and side slopes
Commonly associated soils: Cecil, McQueen, State, Pacolet, Tarrus, and Wynott soils
Slope range: 2 to 30 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Rhodudults

Typical Pedon

Hiwassee clay loam, 2 to 8 percent slopes, moderately eroded; 4.9 miles north of Wadesboro on North Carolina Highway 109, about 2.0 miles east on Secondary Road 1710, about 1.2 miles northeast on Secondary Road 1703, about 1.0 mile southeast on Secondary Road 1742, about 5.6 miles east on Secondary Road 1727, about 40 feet north of the road, in woods; Mangum USGS topographic quadrangle; lat. 35 degrees 02 minutes 27 seconds N. and long. 79 degrees 52 minutes 58 seconds W.

Ap—0 to 4 inches; dark red (2.5YR 3/6) clay loam; moderate medium granular structure; friable; many fine and common medium roots; 2 percent rounded quartz gravel; strongly acid; abrupt smooth boundary.

Bt1—4 to 38 inches; dark reddish brown (2.5YR 3/4) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; 2 percent rounded quartz gravel; few fine prominent very dark gray (5YR 3/1) manganese concretions; strongly acid; abrupt smooth boundary.

Bt2—38 to 44 inches; dark reddish brown (2.5YR 3/4) clay; common medium prominent reddish yellow (5YR 7/6) mottles; moderate medium subangular blocky structure; firm; common fine and medium roots; 4 percent rounded quartz gravel; common fine prominent very dark gray (5YR 3/1) manganese concretions; very strongly acid; gradual smooth boundary.

Bt3—44 to 58 inches; dark red (2.5YR 3/6) clay loam; common medium prominent reddish yellow (5YR 7/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; 6 percent rounded quartz gravel; common fine prominent very dark gray (5YR 3/1) manganese concretions; very strongly acid; gradual smooth boundary.

BC—58 to 65 inches; red (2.5YR 4/6) clay loam; many medium prominent reddish yellow (5YR 7/6) and common medium prominent reddish yellow (7.5YR 6/8) mottles; weak coarse subangular blocky structure; firm; 6 percent rounded quartz gravel; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common throughout the profile
Content of concretions: None to common throughout the profile
Content and size of rock fragments: Less than 15 percent, by volume, throughout the profile; mostly gravel
Reaction: Slightly acid to very strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10R to 7.5YR, value of 2 or 3, and chroma of 2 to 6
Texture—clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 3, and chroma of 2 to 6
Mottles (if they occur)—shades of brown, yellow, or red in the lower part of horizon
Texture—clay, sandy clay, silty clay, or clay loam

BC horizon:
Color—hue of 10R or 2.5YR, value of 3 or 4, and chroma of 4 to 8
Mottles (if they occur)—shades of yellow or brown
Texture—clay loam, sandy clay loam, or silty clay loam

C horizon (if it occurs):
Color—horizon has hue of 10R to 10YR, value of 3 to 5, and chroma of 4 to 8, or it is mottled in shades of these colors
Texture—sandy loam, sandy clay loam, loam, silt loam, or clay loam

Hornsboro Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Old alluvium derived mainly from Triassic sedimentary rock
Landscape: Piedmont
Landform: Low stream terraces
Landform position: Slightly concave slopes
Commonly associated soils: Chastain, Chewacla, McQueen, Roanoke, Shellbluff, and Tetotum soils
Slope range: 0 to 2 percent
Taxonomic class: Fine, mixed, active, thermic Typic Natraqualfs

Typical Pedon

Hornsboro silt loam, 0 to 2 percent slopes, rarely flooded; 3.0 miles west of Wadesboro on North Carolina Highway 742, about 1.0 mile north on Secondary Road 1642, about 1,000 feet east on a farm road, 500 feet southeast of the corner of woods and 2,000 feet west of Goulds Fork Creek; Ansonville USGS topographic quadrangle; lat. 35 degrees 04 minutes 45 seconds N. and long. 80 degrees 06 minutes 48 seconds W.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium granular structure; friable; common very fine and few medium roots; neutral; abrupt smooth boundary.

E—6 to 10 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable; few fine roots; few fine distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions; slightly alkaline; clear smooth boundary.

Bt1—10 to 24 inches; light yellowish brown (2.5Y 6/3) clay; weak medium prismatic structure parting to moderate medium subangular blocky; firm; sticky and plastic; common fine roots throughout; many medium prominent yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation; common distinct clay films on faces of peds; moderately alkaline; gradual smooth boundary.

Bt2—24 to 37 inches; yellowish brown (10YR 5/6 and 5/4) and gray (N 6/0) clay; weak medium prismatic structure parting to moderate medium subangular blocky; firm; sticky and plastic; few fine roots; yellowish brown areas are masses of iron accumulation and gray areas are iron depletions; common distinct clay films on faces of peds; moderately alkaline; gradual smooth boundary.

Bt3—37 to 52 inches; yellowish brown (10YR 5/4) clay; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; sticky and very plastic; few fine roots; common medium distinct gray (10YR 6/1) irregularly shaped iron depletions and common medium faint brownish yellow (10YR 6/8) irregularly shaped masses of iron accumulation; common distinct clay films on faces of peds; few fine rounded manganese concretions; few calcium carbonate concretions 0.25 to 1 inch in diameter; moderately alkaline; gradual smooth boundary.

Btg—52 to 62 inches; gray (10YR 6/1) clay; weak medium subangular blocky structure; firm; sticky and very plastic; few fine roots; common fine prominent yellowish brown (10YR 5/8) irregularly shaped masses of iron accumulation; common distinct clay films on faces of peds; few calcium carbonate concretions 0.25 to 1 inch in diameter; 2 percent rounded quartz gravel; moderately alkaline; gradual smooth boundary.

BC—62 to 70 inches; gray (10YR 6/1) and yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; yellowish brown areas are masses of iron accumulation and light gray areas are iron depletions; 5 percent rounded quartz gravel; moderately alkaline; gradual smooth boundary.

2C—70 to 80 inches; light gray (10YR 7/1), yellowish brown (10YR 5/8), and brown (7.5YR 4/4) fine sandy loam; massive; friable; yellowish brown and brown areas are masses of iron accumulation and light gray areas are iron depletions; neutral.

Range in Characteristics

Thickness of the solum: 40 to more than 60 inches

Depth to bedrock: More than 60 inches

Content of concretions: Few calcium carbonate concretions in the Bt, Btg, BC, BCg, Cg, and/or C horizons in some pedons

Content and size of rock fragments: 0 to 5 percent, by volume, in the A, BE, BA, Bt, and Btg horizons and 0 to 35 percent in the BC, BCg, C, Cg, and 2C horizons; mostly rounded quartz gravel

Reaction: Very strongly acid to moderately alkaline in the A, E, Btg, and Bt horizons and slightly acid to moderately alkaline throughout the rest of the profile

A or Ap horizon:

Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 2 to 5, and has chroma of 0 to 4

Texture—silt loam

E horizon:

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 or 4

Texture—loam, silt loam, very fine sandy loam, fine sandy loam, or sandy loam

Redoximorphic features—iron depletions in shades of gray

Eg horizon (if it occurs):

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 0 to 2

Texture—loam, silt loam, very fine sandy loam, fine sandy loam, or sandy loam

Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BE or BA horizon (if it occurs):

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 to 8

Texture—sandy clay loam, silty clay loam, loam, or silt loam

Redoximorphic features—iron depletions in shades of gray

Bt horizon:

Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 to 8

Texture—silty clay loam, clay loam, silty clay, sandy clay, or clay

Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Btg horizon:

Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 5 to 7, and has chroma of 0 to 2

Texture—silty clay loam, clay loam, silty clay, sandy clay, or clay

Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BC horizon:

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 3 to 6

Texture—sandy clay, silty clay loam, loam, clay loam, sandy clay loam, or fine sandy loam

Redoximorphic features—masses of iron

accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

BCg horizon (if it occurs):
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—sandy clay, silty clay loam, loam, clay loam, sandy clay loam, or fine sandy loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

C or 2C horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 to 8
Texture—variable
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Cg or 2Cg horizon (if it occurs):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 0 to 2
Texture—variable
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Iredell Series

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Very slow or slow
Parent material: Residuum weathered from mafic high-grade metamorphic or igneous rock
Landscape: Piedmont uplands
Landform: Narrow ridges
Landform position: Interfluves
Commonly associated soils: Mayodan, Pinoka, Polkton, Wadesboro, White Store, and Wynott soils
Slope range: 1 to 6 percent
Taxonomic class: Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs

Typical Pedon

Iredell fine sandy loam, 1 to 6 percent slopes; 7 miles north of Lilesville on Secondary Road 1704, about 1 mile north of the intersection of Secondary Roads 1743 and 1704 on Secondary Road 1704, about 200 feet west of the road, in woods; Mangum USGS topographic quadrangle; lat. 35 degrees 03 minutes 07 seconds N. and long. 79 degrees 55 minutes 57 seconds W.

A—0 to 4 inches; brown (10YR 4/3) fine sandy loam; moderate medium granular structure; friable; many fine roots; many fine black manganese concretions; strongly acid; abrupt wavy boundary.

E—4 to 6 inches; brown (10YR 5/3) fine sandy loam; moderate medium granular structure; friable; many fine roots; common fine black manganese concretions; strongly acid; abrupt wavy boundary.

Btss1—6 to 16 inches; dark yellowish brown (10YR 4/4) clay; moderate coarse prismatic structure breaking to weak medium angular blocky; very firm; very sticky and very plastic; common fine and few medium roots; many fine black manganese concretions; many slickensides on faces of peds; many cracks 1/2 inch wide between the peds; slightly acid; gradual wavy boundary.

Btss2—16 to 23 inches; dark yellowish brown (10YR 4/4) clay; weak coarse prismatic structure breaking to weak medium angular blocky; very firm; very sticky and very plastic; few fine roots; many fine black manganese concretions; many slickensides on faces of peds; few cracks 1/4 inch wide between the peds; slightly alkaline; clear smooth boundary.

BC—23 to 27 inches; dark yellowish brown (10YR 4/4) sandy clay loam; many medium faint dark brown (10YR 3/3) mottles; weak fine subangular blocky structure; friable; few fine roots; few fine crystals of feldspar; few fine black manganese concretions; moderately alkaline; clear smooth boundary.

C—27 to 54 inches; multicolored sandy clay loam saprolite in shades of white, gray, brown, yellow, and black; massive; friable; moderately alkaline; clear smooth boundary.

Cr—54 to 60 inches; weathered mafic bedrock that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 40 to more than 60 inches to soft bedrock and more than 60 inches to hard bedrock
Content of mica flakes: None to many throughout the profile
Content of concretions: Few to many throughout the profile; mostly manganese
Content and size of rock fragments: Less than 15 percent, by volume, in the A, E, and Bt horizons and less than 10 percent in the C horizon; mostly gravel
Reaction: Strongly acid to neutral in the A horizon, moderately acid to moderately alkaline in the B horizon, and neutral to moderately alkaline in the C horizon
A or Ap horizon:
Color—hue of 10YR to 5Y, value of 4 or 5, and chroma of 2 to 4

Texture—fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 1 to 3
Texture—fine sandy loam, loam, silt loam, clay loam, or sandy loam

Btss horizon:
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 3 to 6
Texture—clay
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown; below the upper 10 inches of horizon

BC horizon:
Color—horizon has hue of 10YR to 5Y, value of 4 to 8, and chroma of 2 to 6, or it is mottled in shades of these colors
Texture—loam, sandy clay loam, or clay loam
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

C horizon:
Color—multicolored in shades of white, gray, brown, yellow, or black
Texture—sandy loam, loam, sandy clay loam, or silt loam

Cr layer:
Type of bedrock—weathered, partially consolidated diabase that can be dug with difficulty with hand tools

Johnston Series

Depth class: Very deep
Drainage class: Very poorly drained
Permeability: Moderately rapid
Parent material: Recent alluvium
Landscape: Upper Coastal Plain and Sandhills
Landform: Flood plains
Landform position: Planar to slightly concave slopes
Commonly associated soils: Chewacla and Rains soils
Slope range: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts

Typical Pedon

Johnston sandy loam, 0 to 2 percent slopes, frequently flooded; 3 miles south of Morven on North Carolina Highway 145, about 0.4 mile south of Secondary Road 1003, about 200 feet east in woods; Morven West USGS topographic quadrangle; lat. 34 degrees 49 minutes 18 seconds N. and long. 80 degrees 02 minutes 00 seconds W.

A—0 to 40 inches; black (10YR 2.5/1) sandy loam; massive; friable; many coarse and medium roots; very strongly acid; abrupt smooth boundary.
Cg1—40 to 50 inches; dark gray (10YR 4/1) loamy sand; single grain; loose; common medium roots; very strongly acid; abrupt smooth boundary.
Cg2—50 to 60 inches; gray (10YR 5/1) sandy loam; massive; very friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 24 to 48 inches
Depth to bedrock: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed

A horizon:
Color—horizon has hue of 10YR to 5Y or is neutral is hue, has value of 2 or 3, and has chroma of 0 to 2
Texture—sandy loam

Cg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—sandy loam, loam, fine sandy loam, coarse sandy loam, loamy sand, loamy fine sand, or sand

Lillington Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Old alluvium
Landscape: Upper Coastal Plain and Sandhills
Landform: Narrow ridges
Landform position: Head slopes and side slopes
Commonly associated soils: Ailey, Dothan, Emporia, Fuquay, and Pacolet soils
Slope range: 2 to 15 percent
Taxonomic class: Loamy-skeletal, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Lillington gravelly sandy loam, 2 to 8 percent slopes; 0.7 mile north of Lilesville on Secondary Road 1703, 0.7 mile north of Lilesville on Secondary Road 1703, about 2.5 miles northeast on Secondary Road 1704, about 0.2 mile east on a gravel pit road, 50 feet north of the road; Mangum USGS topographic quadrangle; lat. 35 degrees 00 minutes 22 seconds N. and long. 79 degrees 57 minutes 30 seconds W.

A—0 to 7 inches; grayish brown (10YR 5/2) gravelly sandy loam; weak medium granular structure; very friable; many fine and medium roots; 30 percent rounded quartz gravel, by volume; very strongly acid; clear smooth boundary.

E—7 to 16 inches; pale brown (10YR 6/3) gravelly sandy loam; weak medium granular structure; very friable; many fine and medium roots; 30 percent rounded quartz gravel; very strongly acid; clear smooth boundary.

BE—16 to 19 inches; yellowish brown (10YR 5/6) gravelly sandy loam; weak medium granular structure; friable; many fine and medium roots; 30 percent rounded quartz gravel, by volume; very strongly acid; clear smooth boundary.

Bt1—19 to 27 inches; strong brown (7.5YR 5/8) very gravelly sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; 35 percent rounded quartz gravel, by volume; very strongly acid; gradual smooth boundary.

Bt2—27 to 48 inches; strong brown (7.5YR 5/8) very gravelly sandy clay loam; many medium distinct yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; friable; common fine roots; 35 percent rounded quartz gravel, by volume; very strongly acid; gradual smooth boundary.

BC—48 to 60 inches; red (2.5YR 4/6) gravelly sandy loam; common medium distinct yellowish red (5YR 5/8) and few medium prominent yellowish brown (10YR 5/6) mottles; weak coarse subangular blocky structure; friable; about 20 percent rounded quartz gravel, by volume; common fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common
Content and size of rock fragments: 15 to 60 percent, by volume, in the surface layers, 35 to 80 percent in the Bt horizon, and 15 to 80 percent in the C horizon; mostly rounded quartz gravel (fig. 12)
Reaction: Strongly acid or very strongly acid throughout the profile, except where surface layers have been limed

A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4
Texture (fine-earth fraction)—sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 2 to 4
Texture (fine-earth fraction)—loamy sand or sandy loam

BE horizon:
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 8
Texture (fine-earth fraction)—loamy sand or sandy loam

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 6 to 8
Mottles—shades of red, yellow, or brown
Texture (fine-earth fraction)—sandy clay loam or clay loam

BC horizon:
Color—hue of 10R to 10YR, value of 4 to 7, and chroma of 4 to 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture (fine-earth fraction)—sandy loam, loam, or sandy clay loam

C horizon (if it occurs):
Color—variable
Texture (fine-earth fraction)—stratified sand to clay

Mayodan Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from Triassic fine-grained sandstone, mudstone, siltstone, shale, or conglomerate
Landscape: Triassic Basin
Landform: Broad ridges, hillslopes, and narrow ridges
Landform position: Interfluves and side slopes
Commonly associated soils: Creedmoor, Granville, Iredell, Pinoka, Polkton, Wadesboro, and White Store soils
Slope range: 2 to 25 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

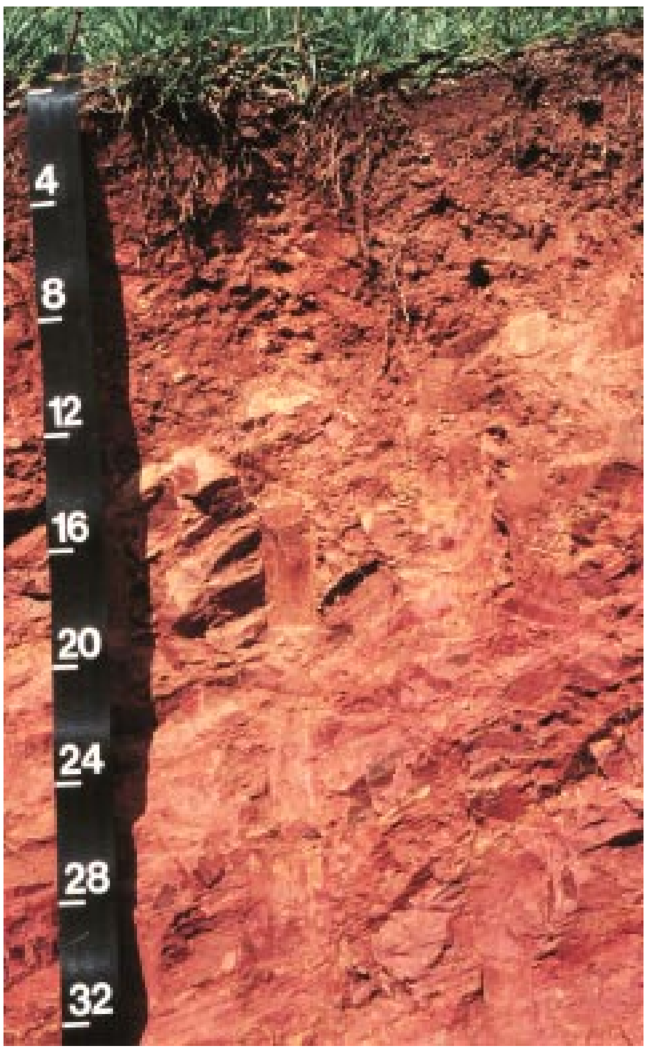


Figure 8.—A representative profile of Badin soils that illustrates the tilted angle at which the bedrock can occur in areas of these soils. Although channers commonly occur in the subsoil, the paralithic contact with weathered argillite occurs at a depth of about 28 inches. These soils are suited to most agricultural uses, but they may have a windthrow hazard, due to the limited rooting depth, that affects forestry use and management. They are poorly suited to septic tank absorption fields.

Figure 9.—A representative profile of the moderately well drained Callison soils. Areas of iron depletions occur below a depth of about 20 inches. The paralithic contact with weathered slate occurs at a depth of about 28 inches. A lithic contact with unweathered slate is between depths of 40 and 50 inches. The presence of a perched water table, occurring between December and March, and the depth to bedrock of these soils affect many uses.

Figure 10.—A representative profile of Goldston soils. A paralithic contact with weathered slate occurs at a depth of about 12 inches. At a depth of about 23 inches, a lithic contact occurs with hard unweathered slate. Because of the depth to bedrock, these soils may have severe limitations for many uses.

Figure 11.—A representative profile of Granville soils that occur in the Triassic Basin region of Anson County. These well drained, very deep soils are well suited to most uses.

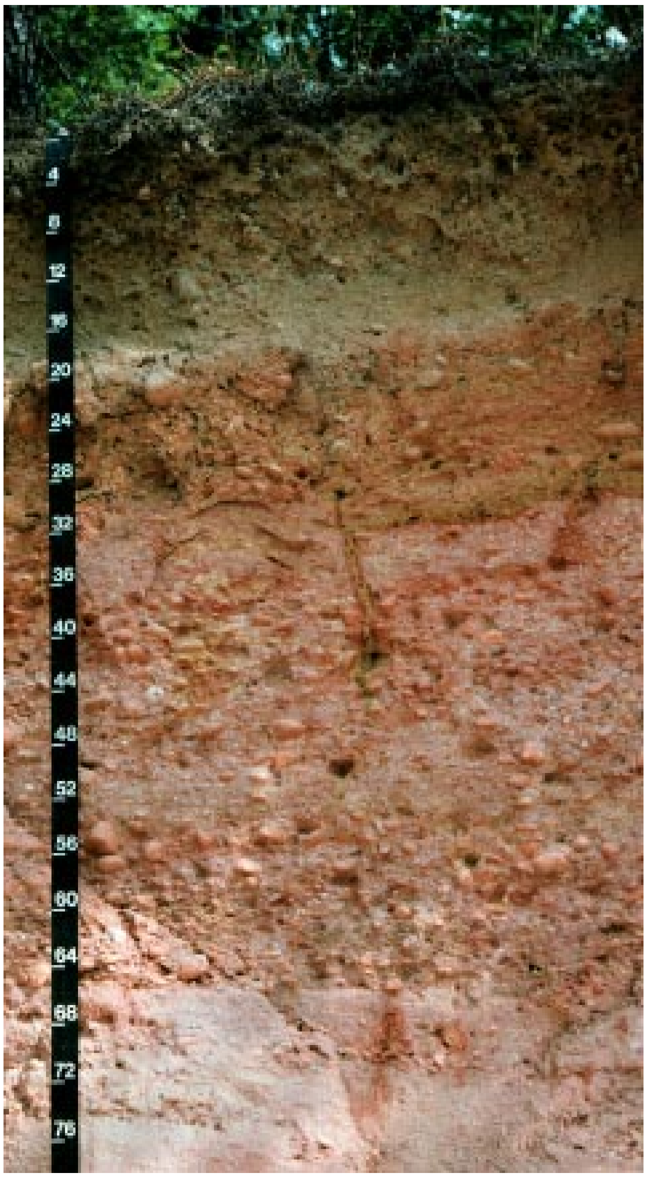


Figure 12.—A representative profile of Lillington soils, located in the side of a pit which was being mined for the rocks which are visible throughout the profile. The presence of the rounded rock is evidence of the alluvial process which formed these soils.

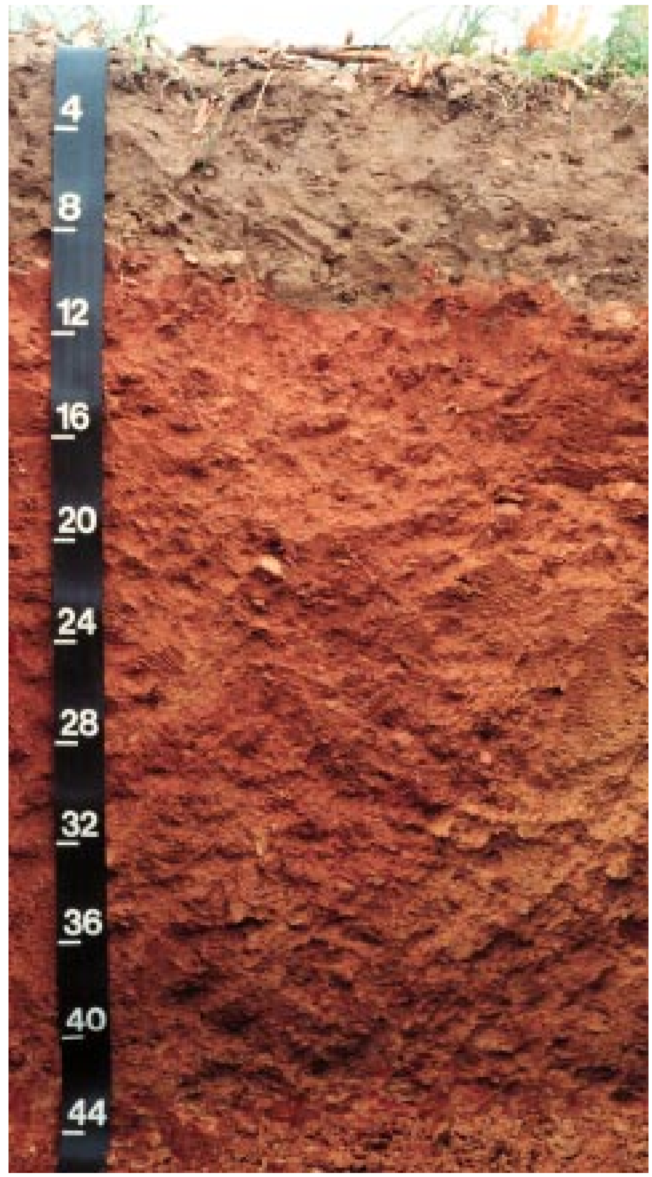


Figure 13.—A profile of Mayodan soils showing a thick fine sandy loam surface layer to a depth of about 9 inches. The clayey subsoil extends to a depth of about 33 inches. Bedrock does not occur within a depth of 60 inches.

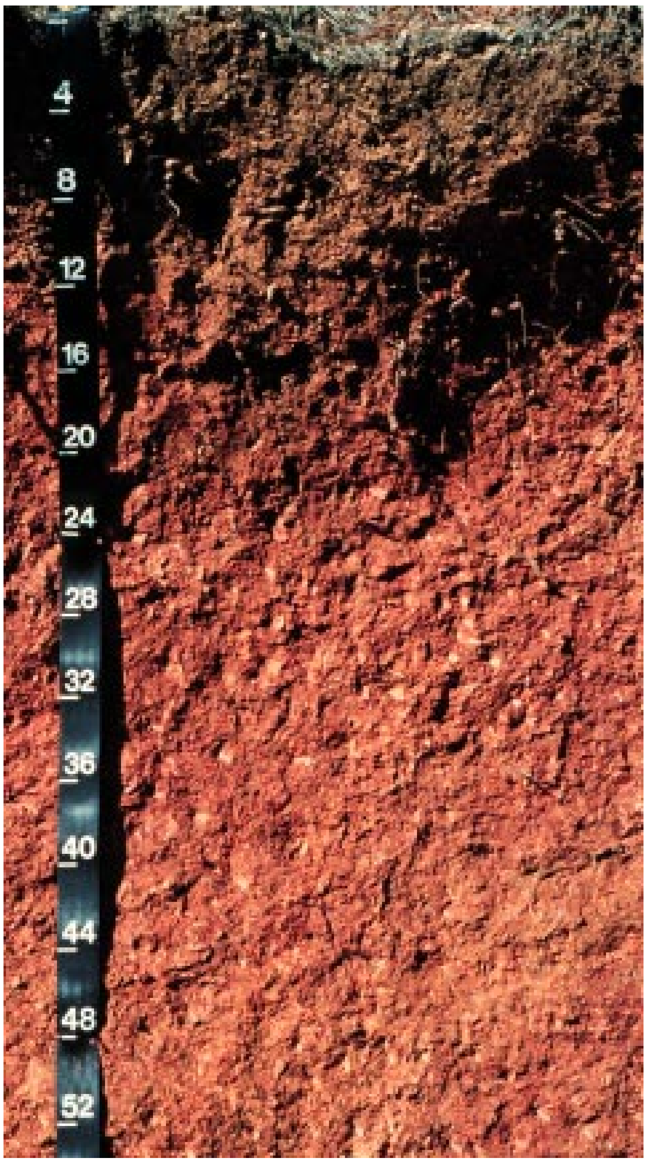


Figure 14.—A representative profile of Pacolet soils. The surface layer is gravelly sandy loam. The clayey subsoil is between depths of about 12 and 28 inches. The content of gravel ranges from few to many throughout the profile.

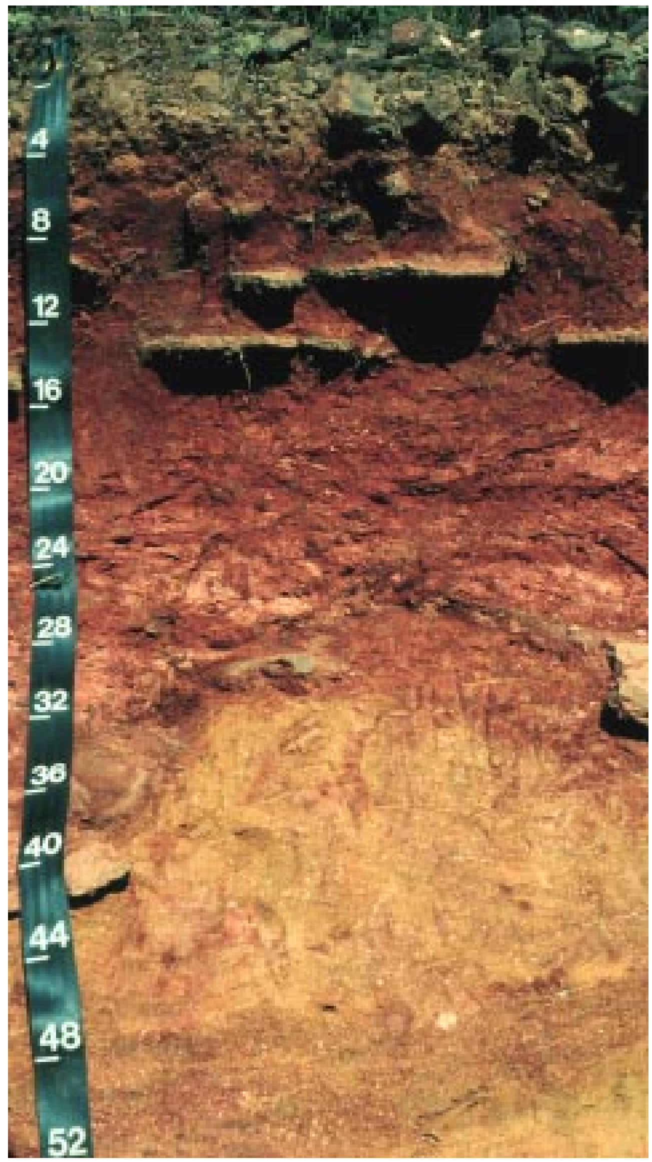


Figure 15.—A representative profile of Vaucluse soils. A common feature of these soils is a slightly cemented ironstone layer, shown between depths of 8 and 16 inches. A brittle, dense layer is between depths of about 30 and 50 inches.

Typical Pedon

Mayodan fine sandy loam, 2 to 8 percent slopes; 3 miles west of Wadesboro on U.S. Highway 74, about 100 feet south on Secondary Road 1422, about 0.4 mile east on Old U.S. Highway 74 (State Road 1207), 200 feet southeast on a woodland road, 10 feet south of the road, in woods; Russellville USGS topographic quadrangle; lat. 34 degrees 58 minutes 44 seconds N. and long. 80 degrees 08 minutes 01 second W.

Ap—0 to 6 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium granular structure; friable; many medium and fine roots; very strongly acid; clear smooth boundary.

BE—6 to 9 inches; yellowish red (5YR 5/6) sandy clay loam; many coarse prominent light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; friable; common fine and medium roots; very strongly acid; clear wavy boundary.

Bt1—9 to 24 inches; yellowish red (5YR 5/8) clay; common medium faint yellowish red (5YR 4/6) mottles; moderate medium subangular blocky structure; firm; common fine and medium roots; many prominent clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—24 to 33 inches; yellowish red (5YR 4/6) clay; common medium distinct reddish yellow (7.5YR 6/6) mottles; moderate medium subangular blocky structure; firm; common fine roots; many prominent clay films on faces of peds; very strongly acid; clear wavy boundary.

BC—33 to 40 inches; reddish yellow (5YR 6/6) sandy clay loam; common medium distinct red (2.5YR 5/8), reddish yellow (7.5YR 6/6), and pinkish gray (5YR 7/2) mottles; weak coarse subangular blocky structure; firm; common fine roots; few faint clay films on faces of peds; 5 percent rounded quartz gravel; very strongly acid; abrupt smooth boundary.

C—40 to 72 inches; mottled reddish yellow (5YR 6/6 and 7.5YR 6/6), red (2.5YR 5/8), and pinkish gray (5YR 7/2) sandy clay loam saprolite; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches (fig. 13)
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common in the Bt horizon
Content and size of rock fragments: Less than 35 percent, by volume, in the A and E horizons and less than 15 percent in the Bt horizon; mostly quartz gravel
Reaction: Very strongly acid to moderately acid in the A horizon and the upper part of the B horizon, except where surface layers have been limed, and very strongly acid or strongly acid in the lower part of the B horizon and in the C horizon

A or Ap horizon:
Color—hue of 5YR to 2.5Y, value of 2 to 6, and chroma of 2 to 8
Texture (fine-earth fraction)—fine sandy loam or sandy loam

E horizon (if it occurs):
Color—hue of 5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—sandy loam, loamy sand, fine sandy loam, silt loam, or loam

BE horizon:
Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 2 to 8
Texture (fine-earth fraction)—sandy loam, fine sandy loam, loam, sandy clay loam, silty clay loam, or clay loam

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 3 to 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture (fine-earth fraction)—clay loam, silty clay loam, sandy clay, silty clay, or clay

BC horizon:
Color—horizon has hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 2 to 8 or is mottled in shades of these colors
Texture (fine-earth fraction)—sandy clay loam, loam, clay loam, sandy clay, silty clay, silty clay loam, or clay

C horizon:
Color—horizon has hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 2 to 8 or is multicolored
Texture (fine-earth fraction)—variable; typically loamy saprolite

McQueen Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Old alluvial sediments
Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: High stream terraces

Landform position: Head slopes
Commonly associated soils: Hiwassee, Riverview, Shellbluff, State, and Tetotum soils
Slope range: 1 to 6 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

McQueen loam, 1 to 6 percent slopes; 9 miles northwest of Wadesboro on North Carolina Highway 742, about 200 feet north of Lanes Creek, 500 feet east of the road, in a field; Polkton USGS topographic quadrangle; lat. 35 degrees 03 minutes 56 seconds N. and long. 80 degrees 11 minutes 30 seconds W.

Ap—0 to 5 inches; brown (7.5YR 4/4) loam; moderate medium granular structure; friable; common fine roots; moderately acid; abrupt smooth boundary.
Bt1—5 to 26 inches; red (2.5YR 4/6) clay; moderate fine subangular blocky structure; firm; common fine roots; few fine flakes of mica; few faint clay films on faces of peds; very strongly acid; clear smooth boundary.
Bt2—26 to 45 inches; red (2.5YR 4/8) clay; weak fine subangular blocky structure; firm; few fine roots; common medium distinct strong brown (7.5YR 5/6) and yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
BC—45 to 55 inches; red (2.5YR 4/8) silty clay loam; weak coarse subangular blocky structure; friable; few fine roots; common medium distinct strong brown (7.5YR 5/6) and yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; very strongly acid; gradual smooth boundary.
C—55 to 62 inches; strong brown (7.5YR 5/8) silt loam; massive; friable; few fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 50 to more than 80 inches
Depth to bedrock: More than 80 inches
Content of mica flakes: None to common in the A horizon and few to many in the B and C horizons
Content and size of rock fragments: Less than 5 percent, by volume, throughout the profile; mostly gravel
Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 2 to 6
Texture—loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—clay, silty clay, silty clay loam, or clay loam
Redoximorphic features—masses of iron accumulation (if they occur) are in shades of yellow, red, or brown and in the lower part of horizon; iron depletions in shades of gray (if they occur) are below a depth of 36 inches

BC horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 6 or 8
Texture—silty clay loam, clay loam, sandy loam, or sandy clay loam
Redoximorphic features—masses of iron accumulation (if they occur) in shades of yellow, red, or brown; iron depletions (if they occur) in shades of gray

C horizon:
Color—horizon has hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 4 to 8, or it is mottled in shades of these colors
Texture (fine-earth fraction)—variable; ranging from loamy sand to clay loam
Redoximorphic features—masses of iron accumulation (if they occur) in shades of yellow, red, or brown; iron depletions (if they occur) in shades of gray

Misenheimer Series

Depth class: Shallow
Drainage class: Moderately well drained or somewhat poorly drained
Permeability: Moderately rapid
Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Broad upland flats, drainageways, and heads of drainageways
Landform position: Interfluves
Commonly associated soils: Badin, Callison, Goldston, Nanford, and Tarrus soils
Slope range: 0 to 3 percent

Taxonomic class: Loamy, siliceous, semiactive, thermic, shallow Aquic Dystrudepts

Typical Pedon

Misenheimer channery silt loam in an area of Misenheimer-Callison complex, 0 to 3 percent slopes; 6 miles north of Polkton on North Carolina Highway 216, about 0.5 mile north of the intersection of Secondary Roads 1002 and 1449 on Secondary Road 1449, about 1 mile east of the intersection of Secondary Roads 1449 and 1450 on Secondary Road 1450, about 150 feet north of the road; Olive Branch USGS topographic quadrangle; lat. 35 degrees 05 minutes 01 second N. and long. 80 degrees 15 minutes 39 seconds W.

Ap—0 to 7 inches; grayish brown (2.5Y 5/2) channery silt loam; moderate fine granular structure; friable; many fine and medium roots; 20 percent slate channers, by volume; moderately alkaline; abrupt smooth boundary.

E—7 to 12 inches; pale yellow (2.5Y 7/4) channery silt loam; moderate medium granular structure; friable; common fine roots; many coarse prominent yellowish brown (10YR 5/8) masses of iron accumulation; 20 percent slate channers, by volume; slightly acid; abrupt smooth boundary.

Bw—12 to 18 inches; yellowish brown (10YR 5/6) channery silty clay loam; weak fine subangular blocky structure; friable; few fine and medium roots; many coarse prominent light gray (2.5Y 7/2) and common fine distinct light olive brown (2.5Y 5/4) iron depletions; few faint discontinuous clay films on faces of peds; 25 percent slate channers, by volume; very strongly acid; clear smooth boundary.

Cr—18 to 32 inches; weathered fractured argillite that can be dug with difficulty with hand tools; silt loam in fractures; clear smooth boundary.

R—32 inches; unweathered fractured argillite.

Range in Characteristics

Thickness of the solum: Less than 20 inches
Depth to bedrock: 10 to 20 inches to soft bedrock and 20 to more than 40 inches to hard bedrock
Content and size of rock fragments: 15 to 35 percent, by volume, throughout the profile; mostly channers
Reaction: Extremely acid to strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 to 4
Texture (fine-earth fraction)—silt loam

E horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 2 to 4
Texture (fine-earth fraction)—silt loam or loam
Redoximorphic features (if they occur)—masses of iron accumulation in shades of red, yellow, or brown

Bw horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—silt loam, loam, or silty clay loam
Redoximorphic features—iron depletions in shades of gray or brown and masses of iron accumulation in shades of red, yellow, or brown

C horizon (if it occurs):
Color—horizon has hue of 10YR to 5Y or is multicolored
Texture (fine-earth fraction)—silt loam
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Cr layer:
Type of bedrock—weathered, partially consolidated fine-grained rocks of the Carolina Slate Belt that can be dug with difficulty with hand tools

R layer:
Type of bedrock—unweathered fine-grained rocks of the Carolina Slate Belt

Nanford Series

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from schist and other fine-grained metamorphic rocks of the Carolina Slate Belt
Landscape: Piedmont uplands
Landform: Broad ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Emporia, Badin, Georgeville, Tarrus, and Goldston soils
Slope range: 2 to 15 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Nanford silt loam, 2 to 8 percent slopes; 6 miles south of Wadesboro on North Carolina Highway 109, about 1 mile east on Secondary Road 1118, about 200 feet south on Secondary Road 1116, about 900 feet west in woods; Mt. Croghan USGS topographic quadrangle; lat. 34 degrees 52 minutes 15 seconds N. and long. 80 degrees 09 minutes 38 seconds W.

Ap—0 to 6 inches; brown (10YR 5/3) silt loam; weak fine granular structure; friable; many fine and medium roots; very strongly acid; abrupt smooth boundary.

Bt1—6 to 18 inches; yellowish red (5YR 5/8) silty clay; weak medium subangular blocky structure; friable; common fine and medium roots; common distinct clay films on faces of peds; very strongly acid; clear smooth boundary.

Bt2—18 to 31 inches; yellowish red (5YR 5/8) silty clay; common fine prominent brownish yellow (10YR 6/6) and common medium distinct red (2.5YR 4/8) mottles; moderate fine subangular blocky structure; firm; common fine roots; many prominent clay films on faces of peds; very strongly acid; clear smooth boundary.

BC—31 to 41 inches; red (2.5YR 4/8) silty clay loam; many medium prominent brownish yellow (10YR 6/6) mottles; weak coarse subangular blocky structure; firm; common fine roots; very strongly acid; clear smooth boundary.

C—41 to 56 inches; mottled reddish brown (2.5YR 5/4), red (2.5YR 4/8), and brownish yellow (10YR 6/6) silt loam saprolite; massive; friable; very strongly acid; clear wavy boundary.

Cr—56 to 60 inches; weathered, partially consolidated fractured argillite that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 25 to 50 inches
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock
Content and size of rock fragments: Less than 35 percent, by volume, throughout the profile; mostly gravel or channers
Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed

Ap or A horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 2 to 6
Texture (fine-earth fraction)—silt loam

E horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 4 or 6, and chroma of 2 to 6
Texture (fine-earth fraction)—loam, silt loam, or fine sandy loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 or 6, and chroma of 4 to 8
Mottles (if they occur)—shades of red, brown, or yellow
Texture (fine-earth fraction)—clay loam, silty clay loam, silty clay, or clay

BC horizon:
Color—horizon has hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8 or is mottled in shades of these colors
Texture (fine-earth fraction)—loam, silt loam, silty clay loam, or clay loam

C horizon:
Color—multicolored in shades of red, brown, yellow, and gray
Texture (fine-earth fraction)—silt loam or silty clay loam saprolite

Cr layer:
Type of bedrock—weathered, partially consolidated argillite that can be dug with difficulty with hand tools

Pacolet Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from felsic high-grade metamorphic or igneous rock and porphyritic granite
Landscape: Piedmont uplands
Landform: Ridges and hillslopes
Landform position: Interfluves, side slopes, and nose slopes
Commonly associated soils: Ailey, Cecil, Emporia, Hiwassee, Lillington, and Tarrus soils
Slope range: 2 to 45 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Pacolet gravelly sandy loam, 2 to 8 percent slopes; from Lilesville, 1.3 miles south of U.S. Highway 74 on Secondary Road 1733, about 0.1 mile south of Parson Grove Church, 50 feet west of the road; Wadesboro USGS topographic quadrangle; lat. 34 degrees 56 minutes 56 seconds N. and long. 80 degrees 00 minutes 16 seconds W.

Ap—0 to 5 inches; brown (10YR 5/3) gravelly sandy loam; weak fine granular structure; very friable;

many medium and coarse roots; 22 percent fine gravel; moderately acid; abrupt smooth boundary.

Bt—5 to 25 inches; red (2.5YR 4/8) gravelly clay loam; moderate medium subangular blocky structure; firm; common medium roots; common fine flakes of mica; few faint clay films on faces of peds; 17 percent gravel; very strongly acid; clear wavy boundary.

BC—25 to 40 inches; red (2.5YR 4/8) gravelly fine sandy loam; weak coarse subangular blocky structure; friable; few medium roots; common fine flakes of mica; 25 percent gravel; very strongly acid; gradual wavy boundary.

C—40 to 60 inches; mottled red (2.5YR 4/8) and yellowish red (5YR 5/8) gravelly fine sandy loam saprolite weathered from porphyritic granite; massive; friable; common fine flakes of mica; 20 percent fine gravel; strongly acid.

Range in Characteristics

Thickness of the solum: 20 to 40 inches (fig. 14)
Depth to bedrock: More than 60 inches
Content of mica flakes: Few or common in the A, E, B, and BC horizons and few to many in the C horizon
Content and size of rock fragments: Less than 35 percent, by volume, throughout the profile; mostly gravel
Reaction: Very strongly acid to slightly acid in the A horizon, except where limed, and very strongly acid to moderately acid in the B and C horizons

A or Ap horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 1 to 6
Texture (fine-earth fraction)—sandy loam or clay loam

E horizon (if it occurs):
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8
Texture (fine-earth fraction)—loamy sand, loamy coarse sand, loam, sandy loam, or fine sandy loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma of 6 or 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture (fine-earth fraction)—clay, clay loam, or sandy clay

BC horizon:
Color—hue of 10R to 5YR, value of 4 or 5, and chroma of 6 or 8
Mottles (if they occur)—shades of red, yellow, or brown
Texture (fine-earth fraction)—clay loam, sandy clay loam, sandy loam, or loam

C horizon:
Color—horizon has hue of 10R to 5YR, value of 4 or 5, and chroma of 6 or 8 or is multicolored
Mottles (if they occur)—shades of red, yellow, or brown
Texture (fine-earth fraction)—loamy saprolite

Pelion Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow or moderately slow
Parent material: Loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Upland depressions and heads of drainageways
Landform position: Interfluves
Commonly associated soils: Ailey, Dothan, Emporia, Fuquay, and Rains soils
Slope range: 1 to 4 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Aquic Kanhapludults

Typical Pedon

Pelion loamy sand, 1 to 4 percent slopes; 1 mile northwest of McFarlan on Secondary Road 1003, about 1,500 feet west of Ramah Grove Church on Secondary Road 1003, about 600 feet north of the road; Morven East USGS topographic quadrangle; lat. 34 degrees 49 minutes 32 seconds N. and long. 79 degrees 59 minutes 48 seconds W.

Ap—0 to 6 inches; grayish brown (10YR 5/2) loamy sand; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

E—6 to 10 inches; brown (10YR 5/3) loamy sand; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt1—10 to 18 inches; light olive brown (2.5Y 5/4) sandy clay loam; weak coarse subangular blocky structure; friable; sand grains coated and bridged with clay; common fine roots; very strongly acid; clear smooth boundary.

Bt2—18 to 24 inches; light olive brown (2.5Y 5/4) sandy clay loam; weak coarse subangular blocky structure; friable; common fine roots; common coarse prominent reddish yellow (7.5YR 6/8) irregularly shaped masses of iron accumulation; few medium distinct light gray (10YR 7/1) irregularly shaped iron depletions; few faint clay films on faces of peds; very strongly acid; clear smooth boundary.

Btg—24 to 40 inches; light gray (10YR 6/1) sandy clay loam; weak coarse subangular blocky structure; friable; few fine roots; common coarse prominent yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 5/8) irregularly shaped masses of iron accumulation; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.

BCx—40 to 65 inches; brownish yellow (10YR 6/6) sandy clay loam; weak fine subangular blocky structure; firm; brittle in 30 percent of the mass; many coarse distinct light gray (10YR 6/1) irregularly shaped iron depletions and many medium distinct light brown (7.5YR 6/4) irregularly shaped masses of iron accumulation; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 72 inches
Depth to bedrock: More than 60 inches
Content and size of rock fragments: 0 to 5 percent, by volume, throughout the profile; mostly gravel
Content of brittle masses: 10 to 60 percent in a subhorizon of the B horizon
Reaction: Very strongly acid to slightly acid in the A and E horizons, except where surface layers have been limed, and extremely acid to strongly acid in the B and BC horizons

A or Ap horizon:
Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 3 to 5, and has chroma of 0 to 3
Texture—loamy sand

E horizon:
Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 4 to 8, and has chroma of 0 to 4
Texture—sand, loamy sand, or sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 6 or 8
Texture—sandy loam or sandy clay loam in the upper part and sandy clay loam, sandy clay, or clay in the lower part
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown and iron depletions in shades of gray; within the upper 10 inches of horizon

Btg horizon:
Color—horizon has hue of 7.5YR to 2.5Y or is neutral in hue, has value of 5 to 8, and has chroma of 1 or 2
Texture—sandy clay loam, sandy clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Btx horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 6 or 8
Texture—sandy loam or sandy clay loam in the upper part and sandy clay loam, sandy clay, or clay in the lower part
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown and iron depletions in shades of gray; within the upper 10 inches of horizon

BC horizon:
Color—horizon has hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8 or is mottled in shades of these colors
Texture—sandy loam or sandy clay loam; strata of sandy clay or clay occur in some pedons
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown and iron depletions in shades of gray

BCx horizon:
Color—horizon has hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8 or is mottled in shades of these colors
Texture—sandy loam or sandy clay loam; strata of sandy clay or clay occur in some pedons
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown and iron depletions in shades of gray

C or 2C horizon (if it occurs):
Color—horizon has hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8 or is mottled in shades of these colors
Texture—variable; ranging from sandy material to clay
Redoximorphic features—masses of iron accumulation in shades of red, yellow, or brown and iron depletions in shades of gray

Pinoka Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderately rapid
Parent material: Residuum weathered from Triassic

sandstone, mudstone, siltstone, shale, or conglomerate
Landscape: Triassic Basin
Landform: Narrow ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Creedmoor, Granville, Iredell, Mayodan, Polkton, Wadesboro, and White Store soils
Slope range: 2 to 30 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

Pinoka fine sandy loam in an area of Pinoka-Carbonton complex, 2 to 8 percent slopes; 3.5 miles north of Wadesboro on North Carolina Highway 109, about 0.6 mile east on State Road 1711, about 0.2 mile north on a wood farm road, 50 feet southeast of the road intersection, in woods; Ansonville USGS topographic quadrangle; lat. 35 degrees 00 minutes 39 seconds N. and long. 80 degrees 00 minutes 58 seconds W.

A—0 to 3 inches; brown (10YR 4/3) fine sandy loam; weak coarse granular structure; friable; many fine and medium roots; 2 percent gravel; very strongly acid; clear wavy boundary.
E—3 to 10 inches; light yellowish brown (10YR 6/4) fine sandy loam; weak coarse granular structure; friable; many fine and medium roots; very strongly acid; clear wavy boundary.
Bt—10 to 25 inches; strong brown (7.5YR 5/6) sandy clay loam; common medium distinct red (2.5YR 4/6) mottles; weak medium subangular blocky structure; friable; common fine and medium roots; very strongly acid; clear wavy boundary.
BC—25 to 30 inches; yellowish brown (10YR 5/6) loam; common medium distinct red (2.5YR 4/6) mottles; weak coarse subangular blocky structure; friable; few fine roots; very strongly acid; clear wavy boundary.
Cr—30 to 60 inches; weathered, partially consolidated sandstone that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to more than 60 inches to hard bedrock
Content and size of rock fragments: 0 to 60 percent, by volume, in any horizon, but average of less than 35 percent throughout the profile; mostly siltstone and mudstone gravel
Reaction: Extremely acid to strongly acid throughout the profile, except where surface layers have been limed

A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 6
Texture (fine-earth fraction)—fine sandy loam

Ap horizon (if it occurs):
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 6
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, very fine sandy loam, or silt loam

E horizon:
Color—hue of 2.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 6
Texture (fine-earth fraction)—fine sandy loam, sandy loam, very fine sandy loam, or silt loam

Bt horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Mottles—shades of red, yellow, or brown
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, very fine sandy loam, silt loam, sandy clay loam, clay loam, or silty clay loam

BC horizon:
Color—hue of 10R to 10YR, value of 3 to 6, and chroma of 3 to 8
Mottles—shades of red, yellow, or brown
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loam, sandy clay loam, or silt loam

C horizon (if it occurs):
Color—mottled in shades of brown, pink, purple, red, white, or yellow
Texture (fine-earth fraction)—fine sandy loam, sandy loam, very fine sandy loam, loam, or silt loam saprolite

Cr layer:
Type of bedrock—weathered, partially consolidated sandstone, siltstone, mudstone, or conglomerate which can be dug with difficulty with hand tools

R layer (if it occurs):
Type of bedrock—unweathered sandstone, siltstone, mudstone, or conglomerate

Polkton Series

Depth class: Moderately deep
Drainage class: Moderately well drained

Permeability: Very slow
Parent material: Residuum weathered from Triassic sandstone, mudstone, siltstone, or shale
Landscape: Triassic Basin
Landform: Ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Claycreek, Creedmoor, Iredell, Mayodan, Pinoka, Wadesboro, and White Store soils
Slope range: 2 to 25 percent
Taxonomic class: Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs

Typical Pedon

Polkton sandy clay loam in an area of Polkton-White Store complex, 2 to 8 percent slopes, severely eroded; 7 miles west of Wadesboro on U.S. Highway 74, about 3.3 miles south of Polkton on Secondary Road 1250, about 100 feet north of the road, in a field; Russellville USGS topographic quadrangle; lat. 34 degrees 57 minutes 26 seconds N. and long. 80 degrees 11 minutes 55 seconds W.

Ap—0 to 7 inches; reddish brown (5YR 4/3) sandy clay loam; weak medium subangular blocky structure; friable; moderately sticky and moderately plastic; many fine roots; slightly acid; abrupt smooth boundary.

Btss1—7 to 18 inches; red (2.5YR 4/6) clay; weak coarse prismatic structure parting to moderate medium angular blocky; extremely firm; very sticky and very plastic; common fine roots; common nonintersecting slickensides; many fine prominent brown (7.5YR 5/4) irregularly shaped masses of iron accumulation; common distinct clay films on faces of peds; very strongly acid; clear wavy boundary.

Btss2—18 to 24 inches; red (2.5YR 4/6) clay; weak coarse prismatic structure parting to moderate medium angular blocky; extremely firm; very sticky and very plastic; few fine roots; common nonintersecting slickensides; many fine prominent brown (7.5YR 5/4) irregularly shaped masses of iron accumulation; common fine prominent light gray (5YR 7/1) irregularly shaped iron depletions; common distinct clay films on faces of peds; very strongly acid; clear wavy boundary.

BC—24 to 36 inches; dark reddish brown (2.5YR 3/4) clay loam; moderate medium subangular blocky structure; firm; moderately sticky and moderately plastic; few fine roots; 10 percent rounded and angular weathered siltstone fragments; strongly acid; clear wavy boundary.

Cr—36 to 52 inches; weathered, partially consolidated Triassic siltstone that can be dug with difficulty with hand tools.

R—52 inches; hard unweathered Triassic siltstone.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock
Content of rock fragments: 0 to 10 percent, by volume, throughout the profile
Reaction: Very strongly acid to slightly acid in the A, Ap, and E horizons, except where surface layers have been limed, and very strongly acid or strongly acid in the Btss, Bt, BC, and C horizons

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 4
Texture—sandy clay loam

E horizon (if it occurs):
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6
Texture—sandy loam, fine sandy loam, loam, or silt loam

Btss horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—sandy clay, silty clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray; below the upper 10 inches of horizon but within a depth of 40 inches

BC horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—sandy clay loam, silty clay loam, or clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

C horizon (if it occurs):
Color—hue of 2.5YR to 2.5Y, value of 3 to 7, and chroma of 1 to 8
Texture—variable

Cr layer:
Type of bedrock—weathered, partially consolidated Triassic siltstone, mudstone, shale, or sandstone that can be dug with difficulty with hand tools

R layer:
Type of bedrock—unweathered Triassic siltstone, mudstone, shale, or sandstone

Rains Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Upland depressions and heads of drainageways
Landform position: Interfluves
Commonly associated soils: Chewacla, Dothan, Emporia, Johnston, and Pelion soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults

Typical Pedon

Rains fine sandy loam, 0 to 2 percent slopes; 0.4 mile east of Morven on North Carolina Highway 145, about 0.2 mile east on Morven Street, 500 feet south in woods; Morven East USGS topographic quadrangle; lat. 34 degrees 51 minutes 32 seconds N. and long. 79 degrees 59 minutes 41 seconds W.

A—0 to 8 inches; very dark gray (10YR 3/1) fine sandy loam; weak medium granular structure; friable; many fine and medium roots; strongly acid; abrupt smooth boundary.
Eg—8 to 12 inches; gray (10YR 4/1) sandy loam; weak medium granular structure; friable; many fine and medium roots; strongly acid; clear smooth boundary.
Btg1—12 to 30 inches; light gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; firm; common fine and medium roots; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; clear smooth boundary.
Btg2—30 to 54 inches; light gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; firm; few fine roots; common coarse distinct yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; very strongly acid; gradual smooth boundary.
BCg—54 to 62 inches; light gray (10YR 7/1) sandy clay; weak coarse subangular blocky structure; common medium distinct brown (10YR 5/3) irregularly shaped masses of iron accumulation; common medium flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: More than 60 inches
Depth to bedrock: More than 60 inches
Reaction: Extremely acid to slightly acid in the A and E horizons, except where surface layers have been limed, and extremely acid to strongly acid throughout the rest of the profile

A or Ap horizon:
Color—horizon has hue of 10YR or 2.5Y or is neutral in hue, has value of 2 to 5, and has chroma of 0 to 2
Texture—fine sandy loam

Eg or E horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, very fine sandy loam, or loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Btg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—dominantly sandy loam, clay loam, fine sandy loam, or sandy clay loam; ranging to sandy clay in the lower part of horizon
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BCg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—sandy loam, fine sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Cg horizon (if it occurs):
Color—horizon has hue of 10YR or is neutral in hue, has value of 5 to 7, and has chroma of 0 to 2
Texture—variable; horizon ranges from sand to sandy clay or is stratified
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Riverview Series

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Parent material: Recent alluvial sediments
Landscape: Piedmont, Triassic Basin, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly convex slopes
Commonly associated soils: Chewacla, Chastain, Hornsboro, McQueen, Shellbluff, Roanoke, State, and Tetotum soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-loamy, mixed, active, thermic Fluventic Dystrudepts

Typical Pedon

Riverview loam, 0 to 2 percent slopes, occasionally flooded; 1 mile north of the intersection of Secondary Road 1641 and U.S. Highway 52 on U.S. Highway 52, about 200 feet west of the highway, 500 feet west of Grindstone Branch; Ansonville USGS topographic quadrangle; lat. 35 degrees 00 minutes 30 seconds N. and long. 80 degrees 05 minutes 24 seconds W.

Ap—0 to 10 inches; brown (7.5YR 4/4) loam; weak medium granular structure; friable; common fine roots; neutral; clear smooth boundary.
Bw—10 to 28 inches; strong brown (7.5YR 5/6) loam; weak medium subangular blocky structure; friable; common fine roots; few fine prominent organic stains; common fine faint reddish yellow (7.5YR 6/6) irregularly shaped masses of iron accumulation; moderately acid; clear smooth boundary.
C1—28 to 36 inches; brown (7.5YR 5/4) fine sandy loam; massive; very friable; common fine roots; few fine flakes of mica; few fine prominent organic stains; moderately acid; gradual smooth boundary.
C2—36 to 45 inches; brown (7.5YR 5/4) loamy fine sand; single grain; very friable; few fine prominent organic stains; common medium distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; moderately acid; gradual smooth boundary.
C3—45 to 62 inches; brown (7.5YR 5/4) loam; massive; very friable; few fine prominent organic stains; common coarse distinct strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; moderately acid.

Range in Characteristics

Thickness of the solum: 24 to 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common throughout the profile
Reaction: Very strongly acid to slightly acid in the A horizon, except where surface layers have been limed, and very strongly acid to moderately acid in the Bw, BC, and C horizons

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 6; where value is 3 and chroma is 2, the horizon is less than 7 inches thick
Texture—loam

Bw horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—loam, sandy clay loam, silt loam, clay loam, silty clay loam, or fine sandy loam
Redoximorphic features (if they occur)—masses of iron accumulation in shades of red, brown, or yellow; iron depletions in shades of gray may occur below a depth of 24 inches

BC horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—sandy clay loam, loam, sandy loam, or fine sandy loam
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, brown, or yellow

C horizon:
Color—hue of 7.5YR or 10YR and value and chroma of 4 to 8
Texture—loam, fine sandy loam, sandy loam, loamy fine sand, loamy sand, or sand; strata of finer textures may occur
Redoximorphic features (if they occur)—iron depletions in shades of gray and masses of iron accumulation in shades of red, brown, or yellow

Buried A and B horizons may occur in some pedons below a depth of 25 inches. They have the same colors and textures as the A and B horizons.

Roanoke Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow or very slow
Parent material: Clayey alluvium
Landscape: Piedmont, Upper Coastal Plain, Triassic Basin, and Sandhills
Landform: Low stream terraces
Landform position: Planar to slightly concave slopes
Commonly associated soils: Chewacla, Chastain, Hornsboro, McQueen, and Tetotum soils
Slope range: 0 to 2 percent

Taxonomic class: Fine, mixed, semiactive, thermic Typic Endoaquults

Typical Pedon

Roanoke loam, 0 to 2 percent slopes, rarely flooded; 5 miles north of Lilesville on Secondary Road 1704, about 0.6 mile east on Secondary Road 1744, about 1.1 miles east on Secondary Road 1737, about 0.5 mile south on a field road, 500 feet south in a field; Mangum USGS topographic quadrangle; lat. 35 degrees 00 minutes 48 seconds N. and long. 79 degrees 54 minutes 23 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

Btg1—7 to 20 inches; light brownish gray (10YR 6/2) silty clay; moderate medium subangular blocky structure; firm; common fine roots; 5 percent rounded gravel; few fine flakes of mica; slightly acid; clear smooth boundary.

Btg2—20 to 30 inches; light gray (10YR 6/1) silty clay; moderate medium subangular blocky structure; firm; common fine roots; 5 percent rounded gravel; common medium distinct yellowish brown (10YR 5/6) and few fine prominent yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; moderately acid; gradual smooth boundary.

Btg3—30 to 43 inches; gray (N 6/0) silty clay loam; weak medium subangular blocky structure; firm; few fine roots; 5 percent rounded gravel; common medium distinct brownish yellow (10YR 6/6) irregularly shaped masses of iron accumulation; few fine flakes of mica; strongly acid; gradual smooth boundary.

BCg—43 to 52 inches; gray (N 6/0) clay; weak medium subangular blocky structure; firm; 5 percent rounded gravel; few fine prominent yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; strongly acid; gradual smooth boundary.

Cg—52 to 60 inches; gray (N 6/0) gravelly sandy clay loam; massive; friable; 20 percent rounded gravel; common medium distinct brownish yellow (10YR 6/6) and few fine prominent yellowish red (5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: Few or common throughout the profile
Content and size of rock fragments: 0 to 10 percent in the A and B horizons and 0 to 50 percent in the C horizon; mostly rounded gravel
Reaction: Extremely acid to strongly acid in the A and B horizons, except where surface layers have been limed, and extremely acid to slightly acid in the C horizon

A or Ap horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 2 to 6, and has chroma of 0 to 2
Texture—loam

E or Eg horizon (if it occurs):
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—fine sandy loam, loam, silt loam, clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Btg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—clay loam, silty clay loam, silty clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BCg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture—clay loam, silty clay loam, sandy clay loam, sandy clay, or clay
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Cg horizon:
Color—horizon has hue of 10YR to 5Y or is neutral in hue, has value of 4 to 7, and has chroma of 0 to 2
Texture (fine-earth fraction)—clay loam, silty clay loam, sandy clay loam, sandy clay, or clay; pockets or strata of coarser textures occur in some pedons
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Shellbluff Series

Depth class: Very deep
Drainage class: Well drained

Permeability: Moderate
Parent material: Recent alluvial sediments
Landscape: Piedmont, Upper Coastal Plain, and Sandhills
Landform: Flood plains
Landform position: Planar to slightly convex slopes
Commonly associated soils: Chewacla, Hornsboro, McQueen, Riverview, and Tetotum soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-silty, mixed, active, thermic Fluventic Dystrudepts

Typical Pedon

Shellbluff loam, 0 to 2 percent slopes, occasionally flooded; 3 miles north of Ansonville on U.S. Highway 52, about 0.5 mile east on Secondary Road 1627, about 1 mile north on Secondary Road 1629 (Carpenter Road), 1 mile east on a field road, 500 feet north of woods line and 300 feet west of the Rocky River; Mount Gilead West USGS topographic quadrangle; lat. 35 degrees 09 minutes 48 seconds N. and long. 80 degrees 05 minutes 41 seconds W.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) loam; weak fine granular structure; friable; strongly acid; abrupt smooth boundary.
Bw1—6 to 30 inches; strong brown (7.5YR 4/6) silty clay loam; weak medium subangular blocky structure; friable; common fine prominent black concretions; slightly acid; clear smooth boundary.
Bw2—30 to 45 inches; brown (7.5YR 4/4) silty clay loam; weak medium subangular blocky structure; friable; common fine prominent black concretions; few fine flakes of mica; slightly acid; gradual smooth boundary.
C—45 to 60 inches; brown (7.5YR 4/4) silty clay loam; massive; friable; many fine prominent black concretions; common coarse distinct light yellowish brown (10YR 6/4) irregularly shaped masses of iron accumulation; few fine flakes of mica; moderately acid.

Range in Characteristics

Thickness of the solum: 20 to more than 40 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to common in the upper part of the profile and few or common in the lower part
Reaction: Very strongly acid to slightly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 8
Texture—loam

Bw horizon:
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8
Texture—loam, silt loam, clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray may occur below a depth of 24 inches

C horizon:
Color—hue of 5YR to 10YR, value of 3 to 8, and chroma of 1 to 8
Texture—horizon is silty clay loam, clay loam, silt loam, or loam or is stratified with coarser textures
Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Buried A and B horizons may occur in some pedons below a depth of 25 inches. They have the same colors and textures as the A and B horizons.

State Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Recent alluvium
Landscape: Piedmont, Upper Coastal Plain, Triassic Basin, and Sandhills
Landform: Low stream terraces
Landform position: Planar to slightly convex slopes
Commonly associated soils: Chewacla, Hiwassee, McQueen, Riverview, Shellbluff, and Tetotum soils
Slope range: 0 to 2 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Typic Hapludults

Typical Pedon

State fine sandy loam, 0 to 2 percent slopes, rarely flooded; 10 miles northwest of Wadesboro on North Carolina Highway 742, about 1 mile north of Lanes Creek on North Carolina Highway 742, about 1 mile east on a farm road, 200 feet north of Lanes Creek; Polkton USGS topographic quadrangle; lat. 35 degrees 04 minutes 25 seconds N. and long. 80 degrees 11 minutes 20 seconds W.

Ap—0 to 11 inches; dark yellowish brown (10YR 4/4) fine sandy loam; moderate fine granular structure; friable; many fine roots; strongly acid; clear smooth boundary.

BA—11 to 16 inches; strong brown (7.5YR 5/6) fine sandy loam; many coarse distinct brown (7.5YR 4/4) mottles; moderate medium granular structure; friable; common fine roots; very strongly acid; clear smooth boundary.

Bt1—16 to 22 inches; yellowish brown (10YR 5/6) clay loam; many coarse faint dark yellowish brown (10YR 4/4) mottles; weak medium subangular blocky structure; friable; common fine roots; very strongly acid; clear smooth boundary.

Bt2—22 to 40 inches; yellowish brown (10YR 5/8) clay loam; few medium distinct strong brown (7.5YR 5/6) and common medium distinct light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; friable; common fine roots; very strongly acid; clear wavy boundary.

BC—40 to 55 inches; yellowish brown (10YR 5/8) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; very strongly acid; gradual smooth boundary.

C—55 to 68 inches; yellowish brown (10YR 5/6) fine sandy loam; massive; friable; common medium distinct light brownish gray (10YR 6/2) irregularly shaped iron depletions; very strongly acid.

Range in Characteristics

Thickness of the solum: 30 to 60 inches

Depth to bedrock: More than 60 inches

Content of mica flakes: None to common throughout the profile

Content and size of rock fragments: 0 to 2 percent, by volume, in the A, BA, B, and BC horizons and 0 to 25 percent in the C horizon; mostly gravel

Reaction: Extremely acid to slightly acid throughout the profile, except where surface layers have been limed

Ap or A horizon:

Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 6

Texture—silt loam

E horizon (if it occurs):

Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8

Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam

BA horizon:

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8

Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, or sandy clay loam

Bt horizon:

Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8

Mottles (if they occur)—shades of red, brown, or yellow

Texture—loam, clay loam, sandy loam, silt loam, or sandy clay loam

BC horizon:

Color—horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8 or is mottled in shades of these colors

Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or sandy clay loam

Redoximorphic features (if they occur)—masses of iron accumulation in shades of red, yellow, or brown; iron depletions in shades of gray may occur below a depth of 48 inches

C horizon:

Color—horizon has hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 2 to 8 or is mottled in shades of these colors

Texture (fine-earth fraction)—stratified and includes sand, loamy sand, loamy fine sand, and sandy loam

Redoximorphic features—iron depletions in shades of gray and masses of iron accumulation in shades of red, yellow, or brown

Tarrus Series

Depth class: Deep

Drainage class: Well drained

Permeability: Moderate

Parent material: Residuum weathered from argillite and other fine-grained rocks of the Carolina Slate Belt

Landscape: Piedmont uplands

Landform: Broad ridges and hillslopes

Landform position: Interfluves and side slopes

Commonly associated soils: Badin, Callison, Georgeville, Goldston, Misenheimer, and Nanford soils

Slope range: 2 to 15 percent

Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Tarrus gravelly silt loam, 2 to 8 percent slopes; 7.0 miles south of Wadesboro on North Carolina Highway 109, about 0.5 mile southeast on Secondary Road

1118, about 0.2 mile east on a field road, 250 feet south in woods; Russellville USGS topographic quadrangle; lat. 34 degrees 52 minutes 42 seconds N. and long. 80 degrees 09 minutes 18 seconds W.

Ap—0 to 5 inches; strong brown (7.5YR 4/6) gravelly silt loam; common medium distinct yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; friable; many fine roots; 15 percent rounded and angular quartz gravel, by volume; moderately acid; abrupt smooth boundary.

Bt1—5 to 10 inches; red (2.5YR 5/8) silty clay; moderate medium subangular blocky structure; friable; common fine roots; many distinct clay films on faces of peds; 3 percent quartz gravel, by volume; very strongly acid; clear smooth boundary.

Bt2—10 to 24 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable; common fine roots; many distinct clay films on faces of peds; 3 percent quartz gravel, by volume; very strongly acid; clear smooth boundary.

Bt3—24 to 32 inches; red (2.5YR 4/6) silty clay; common medium prominent reddish yellow (7.5YR 6/8) and common medium distinct reddish brown (2.5YR 5/4) mottles; weak medium subangular blocky structure; friable; many distinct clay films on faces of peds; 3 percent quartz gravel, by volume; very strongly acid; clear smooth boundary.

BC—32 to 40 inches; red (2.5YR 4/6) silty clay loam; common medium prominent reddish yellow (7.5YR 6/8) and common medium distinct reddish brown (2.5YR 5/4) mottles; weak coarse subangular blocky structure; very friable; few faint clay films in cracks; angular quartz rock in veins; very strongly acid; clear smooth boundary.

C—40 to 54 inches; mottled weak red (10R 5/4), brownish yellow (10YR 6/6), and light gray (5YR 7/1) silt loam saprolite; massive; friable; angular quartz rock in veins; very strongly acid.

Cr—54 to 60 inches; weathered fractured slate that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 30 to 60 inches

Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock

Content of mica flakes: None to common throughout the profile

Content and size of rock fragments: 0 to 40 percent, by volume, in all horizons; mostly gravel

Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed

Ap or A horizon:

Color—hue of 7.5YR or 10YR, value of 3 to 6, and chroma of 2 to 8

Texture (fine-earth fraction)—silt loam

E horizon (if it occurs):

Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 6

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

BE horizon (if it occurs):

Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 3 to 8

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

Bt horizon:

Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma of 6 or 8

Mottles (if they occur)—shades of yellow, brown, or red

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

BC horizon:

Color—horizon has hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8 or is mottled in shades of these colors

Mottles (if they occur)—shades of red, brown, or yellow

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

C horizon:

Color—horizon has hue of 10R to 5YR, value of 4 to 6, and chroma of 4 to 8 or is mottled in shades of these colors

Texture (fine-earth fraction)—silt loam, loam, clay loam, silty clay loam, silty clay, or clay saprolite

Cr layer:

Type of bedrock—weathered, partially consolidated fine-grained rock of the Carolina Slate Belt that can be dug with difficulty with hand tools

Tetotum Series

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Moderate

Parent material: Old alluvial sediments

Landscape: Piedmont, Triassic Basin, Coastal Plain, and Sandhills

Landform: Low stream terraces
Landform position: Planar to slightly convex slopes
Commonly associated soils: Hiwassee, Hornsboro, McQueen, Riverview, Roanoke, Shellbluff, and State soils
Slope range: 0 to 3 percent
Taxonomic class: Fine-loamy, mixed, semiactive, thermic Aquic Hapludults

Typical Pedon

Tetotum silt loam, 0 to 3 percent slopes; 5 miles north of Ansonville on U.S. Highway 52, about 1 mile east of Cedar Hill on Secondary Road 1627, about 0.8 mile northeast on a farm road, 100 feet south of the road; Mt. Gilead West USGS topographic quadrangle; lat. 35 degrees 08 minutes 28 seconds N. and long. 80 degrees 05 minutes 03 seconds W.

Ap—0 to 5 inches; yellowish brown (10YR 5/4) silt loam; strong medium granular structure; friable; many medium and fine roots; moderately acid; abrupt smooth boundary.

Bt1—5 to 21 inches; yellowish brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; friable; common fine roots; very strongly acid; gradual smooth boundary.

Bt2—21 to 28 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; common medium roots; many medium distinct dark yellowish brown (10YR 4/4) and common medium distinct strong brown (7.5YR 5/6) irregularly shaped masses of iron accumulation; very strongly acid; gradual smooth boundary.

Bt3—28 to 36 inches; brownish yellow (10YR 6/8) clay loam; weak medium subangular blocky structure; friable; few medium roots; common medium distinct light gray (10YR 7/1) irregularly shaped iron depletions; very strongly acid; gradual smooth boundary.

Bt4—36 to 48 inches; brownish yellow (10YR 6/8) silty clay loam; weak coarse subangular blocky structure; friable; many coarse distinct light gray (10YR 7/1) irregularly shaped iron depletions; very strongly acid; clear smooth boundary.

C—48 to 60 inches; light gray (10YR 7/1) and brownish yellow (10YR 6/8) loam; massive; friable; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 60 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None or few throughout the profile
Content and size of rock fragments: Less than 15 percent, by volume, throughout the profile; mostly gravel
Reaction: Extremely acid to strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4
Texture—silt loam

E horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, loam, or silt loam

BA or BE horizon (if it occurs):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, loam, silt loam, or sandy clay loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8
Texture—loam, silt loam, clay loam, sandy clay loam, or silty clay loam

Bt horizon (lower part):
Color—hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loam, silt loam, clay loam, sandy clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

Btg horizon (if it occurs):
Color—horizon has hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 1 or 2 or is mottled in shades of these colors
Texture—loam, silt loam, clay loam, sandy clay loam, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

BC horizon (if it occurs):
Color—horizon has hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 3 to 8 or is mottled in shades of these colors
Texture—sandy loam, fine sandy loam, very fine sandy loam, sandy clay loam, or loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

BCg horizon (if it occurs):
Color—horizon has hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 1 or 2 or is mottled in shades of these colors
Texture—sandy loam, fine sandy loam, very fine sandy loam, sandy clay loam, or loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

C horizon:
Color—horizon has hue of 7.5YR to 5Y, value of 5 to 7, and chroma of 3 to 8 or is mottled in shades of these colors
Texture—stratified sands to sandy clay loam with strata of finer textured material in some pedons

Cg horizon (if it occurs):
Color—horizon has hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 1 or 2 or is mottled in shades of these colors
Texture—stratified sands to sandy clay loam with strata of finer textured material in some pedons
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow

Udorthents

Depth class: Shallow to very deep
Drainage class: Well drained or moderately well drained
Permeability: Moderate to slow
Parent material: Fill areas—mixture of materials from natural soils; excavated areas—variable, depending on the type of underlying rock; landfill areas—alternating layers of nonsoil material and soil material
Landscape: Piedmont, Triassic Basin, Upper Coastal Plain, and Sandhills
Landform: Ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Depends on location in county
Slope range: 0 to 15 percent
Taxonomic class: Udorthents

Typical Pedon

Udorthents, loamy, 0 to 15 percent slopes; in an area of excavated material, 0.7 mile north of Lilesville on Secondary Road 1703, about 2.6 miles northeast on Secondary Road 1704, about 200 feet east in reclaimed gravel pit; Mangum USGS topographic quadrangle; lat. 35 degrees 00 minutes 23 seconds N. and long. 79 degrees 57 minutes 32 seconds W.

Ap—0 to 20 inches; mottled yellowish red (5YR 4/8), reddish yellow (7.5YR 6/8), and light gray (10YR 7/2) sandy loam; massive; 10 percent quartz gravel; very strongly acid; gradual smooth boundary.
C1—20 to 40 inches; mottled yellowish red (5YR 5/6), strong brown (7.5YR 5/6), and white (10YR 8/1) gravelly sandy loam; massive; friable; 15 percent rounded quartz gravel; very strongly acid; gradual smooth boundary.
C2—40 to 60 inches; mottled yellowish red (5YR 4/8), reddish yellow (7.5YR 6/8), and light gray (10YR 7/2) sandy loam; massive; friable; 10 percent rounded quartz gravel; very strongly acid.

Range in Characteristics

Thickness of soil material: 0 to more than 60 inches
Depth to bedrock: Excavated areas—0 to more than 60 inches; fill areas—40 to more than 60 inches; landfill areas—more than 20 feet
Content and size of rock fragments: Less than 35 percent, by volume; ranging from gravel to stones
Reaction: Very strongly acid to slightly alkaline throughout the profile, except where surface layers have been limed

Fill areas:
Color—horizon has hue of 2.5YR to 5Y, value of 3 to 8, and chroma of 1 to 8 or is mottled in shades of these colors
Texture (fine-earth fraction)—variable; commonly loamy

Excavated areas:
Color—horizon has hue of 2.5YR to 5Y, value of 3 to 8, and chroma of 1 to 8 or is mottled in shades of these colors
Texture (fine-earth fraction)—variable; commonly loamy

Landfill areas:
Color—multicolored
Texture—variable; commonly loamy material that has layers of nonsoil material

Vaucluse Series

Depth class: Very deep (fig. 15)
Drainage class: Well drained
Permeability: Slow
Parent material: Loamy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Ridges and hillslopes
Landform position: Interfluves and side slopes

Commonly associated soils: Ailey, Badin, Dothan, Emporia, Fuquay, Nanford, Tarrus, and Pelion soils
Slope range: 2 to 25 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Typical Pedon

Vaucluse loamy sand, 2 to 8 percent slopes; 3 miles south of Morven on U.S. Highway 52, about 1 mile west of McFarlan on North Carolina Highway 1837, about 0.4 mile northwest on a farm road; Morven East USGS topographic quadrangle; lat. 34 degrees 48 minutes 40 seconds N. and long. 79 degrees 59 minutes 47 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) loamy sand; weak medium granular structure; very friable; common fine roots; 2 percent rounded quartz gravel, by volume; strongly acid; abrupt smooth boundary.
E—7 to 14 inches; pale brown (10YR 6/3) loamy sand; weak coarse granular structure; very friable; common fine roots; 2 percent rounded quartz gravel, by volume; very strongly acid; clear smooth boundary.
Bt1—14 to 18 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable; few fine roots; very strongly acid; gradual smooth boundary.
Bt2—18 to 29 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; very strongly acid; gradual smooth boundary.
Btx1—29 to 37 inches; yellowish brown (10YR 5/8) sandy clay loam; many medium distinct yellowish red (5YR 4/8) and few medium distinct very pale brown (10YR 7/3) mottles; moderate medium subangular blocky structure; brittle, dense, and slightly cemented in about 20 percent of the mass and friable in the remainder; few fine flakes of mica; very strongly acid; gradual smooth boundary.
Btx2—37 to 50 inches; mottled yellowish red (5YR 4/8), yellowish brown (10YR 5/8), and light yellowish brown (10YR 6/4) sandy clay loam; weak coarse subangular blocky structure; brittle, dense, and slightly cemented in about 50 percent of the mass and friable in the remainder; common fine flakes of mica; very strongly acid; gradual wavy boundary.
C—50 to 60 inches; mottled yellowish red (5YR 4/8) and yellowish brown (10YR 5/8) sandy loam; massive; friable; many fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of the solum: 40 to more than 75 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: None to many in the B and C horizons
Content and size of rock fragments: 0 to 50 percent, by volume, in the A and E horizons and 0 to 10 percent in the B and C horizons; mostly gravel or 1- to 8-inch-sized ironstone
Reaction: Extremely acid to strongly acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture (fine-earth fraction)—loamy sand

E horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—fine sandy loam, sandy loam, loamy sand, loamy coarse sand, or sand

Bt horizon:
Color—horizon has hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8 or is mottled in shades of these colors
Mottles (if they occur)—shades of red, yellow, brown, or gray
Texture—sandy loam or sandy clay loam

Btx horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8
Mottles—shades of red, yellow, brown, or gray
Texture—sandy loam, sandy clay loam, or sandy clay

BC horizon (if it occurs):
Color—horizon has hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 1 to 8 or is mottled in these colors
Texture—loamy sand, coarse sandy loam, sandy loam, or sandy clay loam

C horizon:
Color—mottled in shades of red, yellow, brown, or gray
Texture—stratified

Cd horizon (if it occurs):
Color—mottled in shades of red, yellow, brown, or gray
Texture—stratified

Wadesboro Series

Depth class: Deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Residuum weathered from Triassic fine-grained mudstone, siltstone, shale, sandstone, or conglomerate
Landscape: Triassic Basin
Landform: Ridges and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Creedmoor, Mayodan, Pinoka, Polkton, and White Store soils
Slope range: 2 to 15 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Rhodudults

Typical Pedon

Wadesboro clay loam, 8 to 15 percent slopes, moderately eroded; 7 miles north of Wadesboro on North Carolina Highway 109, about 3.5 miles west on Secondary Road 1649, about 500 feet north in woods; Ansonville USGS topographic quadrangle; lat. 35 degrees 03 minutes 13 seconds N. and long. 80 degrees 03 minutes 32 seconds W.

Ap—0 to 8 inches; dark reddish brown (5YR 3/4) clay loam; moderate medium granular structure; friable; many medium roots; very strongly acid; abrupt smooth boundary.
Bt1—8 to 20 inches; dark red (2.5YR 3/6) clay; moderate medium subangular blocky structure; firm; moderately sticky and moderately plastic; common medium roots; very strongly acid; clear smooth boundary.
Bt2—20 to 30 inches; dark reddish brown (2.5YR 3/4) clay; moderate medium subangular blocky structure; firm; moderately sticky and moderately plastic; common medium roots; very strongly acid; abrupt smooth boundary.
C—30 to 41 inches; dark reddish brown (2.5YR 3/4) loam saprolite; massive; friable; few medium roots; very strongly acid; gradual wavy boundary.
Cr—41 to 60 inches; weathered Triassic siltstone that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 50 inches
Depth to bedrock: 40 to 60 inches to soft bedrock and more than 60 inches to hard bedrock
Content of mica flakes: None to common throughout the profile
Content and size of rock fragments: 0 to 10 percent, by volume, throughout the profile; mostly pebbles
Reaction: Very strongly acid to moderately acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10R to 7.5YR, value of 3 or less, and chroma of 2 to 4
Texture—clay loam

BA horizon (if it occurs):
Color—hue of 10R to 5YR, value of 3 or less, and chroma of 2 to 6
Texture—loam or silt loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 3 or less, and chroma of 3 to 6
Mottles (if they occur)—shades of yellow, brown, or red
Texture—clay loam, silty clay loam, silty clay, or clay

BC horizon (if it occurs):
Color—hue of 10R or 2.5YR, value of 3 or less, and chroma of 3 to 6
Mottles (if they occur)—shades of yellow, brown, red, or gray
Texture—clay loam or silty clay loam

C horizon:
Color—hue of 10R to 5YR, value of 2 to 4, and chroma of 2 to 6
Mottles (if they occur)—shades of yellow, brown, gray, or red
Texture—loam or silt loam saprolite

Cr layer:
Type of bedrock—weathered siltstone, mudstone, sandstone, shale, or conglomerate that can be dug with difficulty with hand tools

Wake Series

Depth class: Shallow
Drainage class: Excessively drained
Permeability: Rapid
Parent material: Residuum weathered from felsic high-grade metamorphic or igneous rock
Landscape: Piedmont uplands
Landform: Ridges
Landform position: Interfluves
Commonly associated soils: Ailey, Cecil, Emporia, and Pacolet soils
Slope range: 2 to 8 percent
Taxonomic class: Mixed, thermic Lithic Udipsamments

Typical Pedon

Wake gravelly loam in an area of Rock outcrop-Wake complex, 2 to 8 percent slopes; 2.5 miles east of Morven on North Carolina Highway 145 at Flat Rock Church, 500 feet southeast of the church, in woods; Lilesville USGS topographic quadrangle; lat. 34 degrees 52 minutes 54 seconds N. and long. 79 degrees 57 minutes 25 seconds W.

A—0 to 10 inches; brown (10YR 4/3) gravelly loamy sand; weak coarse granular structure; very friable; 15 percent fine pebbles; few flakes of mica; very strongly acid; abrupt smooth boundary.
C—10 to 18 inches; yellowish brown (10YR 5/4) gravelly loamy sand; single grain; loose; 15 percent fine pebbles, by volume; few flakes of mica; strongly acid; clear smooth boundary.
R—18 inches; unweathered granite.

Range in Characteristics

Thickness of the solum: Less than 10 inches
Depth to bedrock: 11 to 20 inches to hard bedrock
Content of mica flakes: Few or common throughout the profile
Content and size of rock fragments: 15 to 35 percent, by volume; mostly gravel
Reaction: Very strongly acid to moderately acid throughout the profile, except where surface layers have been limed

A horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture (fine-earth fraction)—loamy sand

C horizon:
Color—horizon has hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8 or is multicolored
Texture (fine-earth fraction)—loamy sand or loamy coarse sand

Cr layer (if it occurs):
Type of bedrock—weathered, partially consolidated granite or gneiss that can be dug with difficulty with hand tools

R layer:
Type of bedrock—unweathered granite or gneiss rock

Wakulla Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid
Parent material: Sandy marine sediments
Landscape: Upper Coastal Plain and Sandhills
Landform: Broad ridges
Landform position: Interfluves
Commonly associated soils: Ailey, Candor, Dothan, Emporia, and Fuquay soils
Slope range: 1 to 8 percent
Taxonomic class: Sandy, siliceous, thermic Psammentic Hapludults

Typical Pedon

Wakulla sand, 1 to 8 percent slopes; 5 miles south of Wadesboro on North Carolina Highway 742, about 0.25 mile east of Bethel Church on Secondary Road 1121, about 100 yards south of the road; Wadesboro USGS topographic quadrangle; lat. 34 degrees 53 minutes 42 seconds N. and long. 80 degrees 04 minutes 39 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) sand; weak coarse granular structure; very friable; many fine roots; moderately acid; abrupt wavy boundary.
E—8 to 24 inches; light yellowish brown (10YR 6/4) sand; single grain; loose; many fine roots; strongly acid; clear wavy boundary.
Bt—24 to 38 inches; yellowish brown (10YR 5/8) loamy sand; weak coarse granular structure; very friable; common fine roots; very strongly acid; gradual wavy boundary.
C1—38 to 54 inches; brownish yellow (10YR 6/6) sand; single grain; loose; few fine roots; very strongly acid; gradual wavy boundary.
C2—54 to 86 inches; very pale brown (10YR 7/3) sand; single grain; loose; few fine roots; very strongly acid.

Range in Characteristics

Thickness of the solum: 28 to 60 inches
Depth to bedrock: More than 60 inches
Reaction: Very strongly acid to moderately acid throughout the profile, except where surface layers have been limed

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 4 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 6 to 8
Texture—loamy sand or loamy fine sand

C horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 1 to 8
Mottles (if they occur)—shades of yellow or brown
Texture—sand, fine sand, or coarse sand

White Store Series

Depth class: Deep
Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Residuum weathered from Triassic sandstone, mudstone, siltstone, or shale
Landform: Triassic Basin
Landscape position: Ridges and hillslopes
Commonly associated soils: Claycreek, Creedmoor, Iredell, Mayodan, Pinoka, Polkton, and Wadesboro soils
Slope range: 2 to 25 percent
Taxonomic class: Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs

Typical Pedon

White Store clay loam in an area of Polkton-White Store complex, 2 to 8 percent slopes, severely eroded; 7.4 miles south of Wadesboro on North Carolina Highway 109, about 1.5 miles west on Secondary Road 1216, about 200 feet south of the road, in woods; Russellville USGS topographic quadrangle; lat. 34 degrees 53 minutes 31 seconds N. and long. 80 degrees 11 minutes 03 seconds W.

Ap—0 to 5 inches; yellowish red (5YR 4/6) clay loam; weak medium subangular blocky structure; firm; common medium and coarse roots; very strongly acid; abrupt smooth boundary.
Btss1—5 to 20 inches; red (2.5YR 4/6) clay; weak coarse prismatic structure breaking to moderate coarse angular blocky; extremely firm; extremely sticky and extremely plastic; common medium and fine roots; common distinct clay films on faces of peds; common slickensides; very strongly acid; clear smooth boundary.
Btss2—20 to 42 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; extremely firm; extremely sticky and extremely plastic; few fine roots; common fine prominent pinkish gray (5YR 6/2) irregularly shaped iron depletions; common slickensides; common distinct clay films on faces of peds; extremely acid; clear smooth boundary.
BC—42 to 48 inches; red (2.5YR 4/6) clay; weak medium subangular blocky structure; very firm; sticky and plastic; few fine roots; extremely acid; gradual smooth boundary.
C—48 to 52 inches; dark reddish brown (2.5YR 3/4) clay loam; massive; firm; extremely acid; clear smooth boundary.
Cr—52 to 60 inches; weathered, partially consolidated Triassic siltstone that can be dug with difficulty with hand tools.

Range in Characteristics

Thickness of the solum: 20 to 50 inches
Depth to bedrock: 40 to 72 inches to soft bedrock and more than 72 inches to hard bedrock
Content of mica flakes: None to common in the lower part of the Bt horizon
Content and size of rock fragments: Less than 15 percent, by volume; mostly fine-grained sandstone and mudstone
Reaction: Very strongly acid or strongly acid throughout the profile, except where surface layers have been limed
Other characteristics: Exchangeable aluminum is high (10 to 25 me/100g) in the Bt horizon

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 2 to 4
Texture—clay loam or fine sandy loam

E horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6
Texture—sandy loam, fine sandy loam, loam, or silt loam

BA or BE horizon (if it occurs):
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—clay loam, sandy clay loam, silty clay, or silty clay loam

Bt horizon (if it occurs):
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—clay, clay loam, sandy clay loam, silty clay, or silty clay loam
Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray below the top 10 inches of the B horizon

Btss horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 6, and chroma of 3 to 8
Texture—clay or silty clay
Redoximorphic features—masses of iron

accumulation in shades of red, brown, or yellow and iron depletions in shades of gray below the top 10 inches of the B horizon

BC horizon:

Color—horizon has hue of 2.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 8 or is mottled in shades of these colors

Texture—sandy loam, loam, sandy clay loam, clay loam, silt loam, silty clay loam, or clay

Redoximorphic features—masses of iron accumulation in shades of red, brown, or yellow and iron depletions in shades of gray

C horizon:

Color—horizon has hue of 2.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 8 or may be mottled in shades of these colors

Texture—variable; ranging from loamy sand to clay

Cg horizon (if it occurs):

Color—horizon has hue of 2.5YR to 2.5Y, value of 3 to 6, and chroma of 1 or 2, is neutral in hue and has value of 3 to 8, or is mottled in shades of red, brown, yellow, or gray

Texture—variable; ranging from loamy sand to clay

Cr layer:

Type of bedrock—weathered sandstone, mudstone, siltstone, or shale that can be dug with difficulty with hand tools

R layer (if it occurs):

Type of bedrock—unweathered Triassic rock

Worsham Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Very slow or slow
Parent material: Local colluvium and alluvium
Landscape: Piedmont uplands and Triassic Basin
Landform: Upland depressions, heads of drainageways, and drainageways
Landform position: Interfluves
Commonly associated soils: Chewacla, Claycreek, Creedmoor, Hornsboro, Mayodan, Roanoke, and Tetotum soils
Slope range: 0 to 3 percent
Taxonomic class: Fine, mixed, active, thermic Typic Endoaquults

Typical Pedon

Worsham loam, 0 to 3 percent slopes; 2.9 miles east of U.S. Highway 52 in Ansonville on Secondary Road 1634, about 0.9 mile south on a farm road, 50 feet west of the road, in a field; Ansonville USGS topographic quadrangle; lat. 35 degrees 04 minutes 41 seconds N. and long. 80 degrees 03 minutes 03 seconds W.

Ap—0 to 8 inches; very dark grayish brown (10YR 3/2) loam; moderate fine granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

Eg—8 to 12 inches; light brownish gray (10YR 6/2) sandy loam; weak medium granular structure; friable; common fine roots; strongly acid; clear smooth boundary.

Btg1—12 to 18 inches; grayish brown (10YR 5/2) sandy clay loam; weak coarse subangular blocky structure; friable; common fine roots; common medium prominent strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation; few fine flakes of mica; very strongly acid; gradual wavy boundary.

Btg2—18 to 36 inches; light brownish gray (10YR 6/2) sandy clay; weak medium subangular blocky structure; firm; few fine roots; common medium prominent strong brown (7.5YR 5/6) irregularly shaped masses of iron accumulation; few fine flakes of mica; very strongly acid; gradual wavy boundary.

Btg3—36 to 48 inches; gray (10YR 5/1) clay; weak coarse subangular blocky structure; firm; many medium prominent strong brown (7.5YR 5/8) irregularly shaped masses of iron accumulation and common medium distinct light gray (10YR 7/2) irregularly shaped iron depletions; few fine flakes of mica; very strongly acid; gradual wavy boundary.

Cg1—48 to 58 inches; gray (10YR 5/1) sandy clay loam; massive; friable; common medium distinct light gray (10YR 7/2) irregularly shaped iron depletions; few fine flakes of mica; strongly acid; gradual wavy boundary.

Cg2—58 to 64 inches; light gray (10YR 7/2) clay loam; massive; firm; few fine flakes of mica; strongly acid.

Range in Characteristics

Thickness of the solum: 40 to 80 inches
Depth to bedrock: More than 60 inches
Content of mica flakes: Few or common in the B and C horizons
Content of rock fragments: 0 to 10 percent, by volume, throughout the profile
Reaction: Strongly acid or very strongly acid, except where surface layers have been limed

Ap horizon:
Color—hue of 10YR to 5Y, value of 2 to 6, and chroma of 0 to 3
Texture—loam

Eg horizon:
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 0 to 3
Texture—sandy loam, fine sandy loam, loam, or silt loam

BEg or EBg horizon (if it occurs):
Color—hue of 10YR to 5Y, value of 5 or 6, and chroma of 0 to 2
Texture—sandy clay loam, sandy clay, clay loam, or clay
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

Btg horizon:
Color—hue of 10YR to 5Y, value of 5 or 6, and chroma of 0 to 2
Texture—sandy clay, clay loam, or clay
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

BCg horizon (if it occurs):
Color—hue of 10YR to 2.5Y, value of 4 to 7, and chroma of 0 to 2
Texture—sandy clay loam or clay loam
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 0 to 2
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features—masses of iron accumulation in shades of yellow, brown, or red

Wynott Series

Depth class: Moderately deep
Drainage class: Well drained
Permeability: Slow
Parent material: Residuum weathered from diabase or intermediate igneous high-grade metamorphic rock
Landscape: Piedmont uplands
Landform: Broad ridges, narrow ridges, and hillslopes
Landform position: Interfluves and side slopes
Commonly associated soils: Badin, Goldston, Nanford, Hiwassee, Iredell, Mayodan, Wadesboro, and Pinoka soils
Slope range: 2 to 10 percent
Taxonomic class: Fine, mixed, active, thermic Typic Hapludalfs

Typical Pedon

Wynott loam, 2 to 8 percent slopes; 2 miles north of Burnsville on North Carolina Highway 742, about 1.2 miles east on Secondary Road 1608, about 0.4 mile north on a farm road, 500 feet west in a field; Aquadale USGS topographic quadrangle; lat. 35 degrees 08 minutes 30 seconds N. and long. 80 degrees 14 minutes 23 seconds W.

Ap—0 to 5 inches; yellowish brown (10YR 5/4) loam; moderate medium granular structure; friable; many medium and fine roots; strongly acid; abrupt smooth boundary.
Bt1—5 to 14 inches; strong brown (7.5YR 5/8) clay; moderate coarse subangular blocky structure; very firm; very sticky and very plastic; common fine roots; common medium distinct black manganese concretions; slightly acid; clear smooth boundary.
Bt2—14 to 25 inches; yellowish brown (10YR 5/8) clay; moderate medium subangular blocky structure; very firm; very sticky and very plastic; few fine roots; common medium distinct black manganese concretions; neutral; abrupt smooth boundary.
C—25 to 36 inches; yellowish brown (10YR 5/6) sandy loam saprolite; massive; friable; neutral; clear wavy boundary.
Cr—36 to 55 inches; weathered diabase that can be dug with difficulty with hand tools; gradual wavy boundary.
R—55 inches; unweathered diabase.

Range in Characteristics

Thickness of the solum: 20 to 40 inches
Depth to bedrock: 20 to 40 inches to soft bedrock and 40 to 60 inches to hard bedrock
Content of concretions: None to many; mostly manganese
Content and size of rock fragments: Less than 35 percent, by volume, in the A horizon and less than 40 percent in the B and C horizons; mostly cobbles and gravel
Reaction: Very strongly acid to slightly acid in the A and E horizons, except where surface layers have been limed, and slightly acid to slightly alkaline in the B, BC, and C horizons

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8
Texture (fine-earth fraction)—loam

E horizon (if it occurs):
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

EB or BE horizon (if it occurs):
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6
Texture (fine-earth fraction)—loam, silt loam, sandy loam, sandy clay loam, clay loam, or silty clay loam

Bt horizon:
Color—hue of 5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8
Mottles (if they occur)—shades of brown or yellow
Texture (fine-earth fraction)—clay loam, silty clay, sandy clay, or clay

BC horizon (if it occurs):
Color—horizon has hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 2 to 8 or is mottled in shades of brown, yellow, black, or white
Texture (fine-earth fraction)—sandy clay loam, loam, clay loam, or sandy clay

C horizon:
Color—horizon has hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 8 or is mottled in shades of brown, yellow, black, or white
Texture (fine-earth fraction)—variable; commonly sandy loam, loam, or silt loam saprolite

Cr layer:
Type of bedrock—weathered, partially consolidated mafic rock that can be dug with difficulty with hand tools

R layer:
Type of bedrock—unweathered mafic rock

Formation of the Soils

This section describes the factors of soil formation and relates them to the soils in the survey area.

Factors of Soil Formation

Soils are formed by processes of the environment acting upon geologic agents, such as metamorphic, igneous, and sedimentary rocks, and fluvial stream sediments. The characteristics of a soil are determined by the combined influence of parent material, climate, plant and animal life, relief, and time. These five factors are responsible for the profile development and chemical properties that differentiate soils *(6)*.

Parent Material

Parent material is the unconsolidated mass in which a soil forms. In Anson County, parent material is a major factor in determining what kind of soil forms and can be correlated to some degree to geologic formations. The general soil map can be used as an approximate guide to the geology of the county.

The Goldston-Badin and Badin-Tarrus-Nanford general soil map units formed in materials weathered from argillite, schist, and other fine-grained rocks of the Carolina Slate Belt. The Pacolet general soil map unit formed in materials weathered from felsic igneous and metamorphic rocks, such as granite, biotite gneiss, and porphyritic granite. The Mayodan-Polkton-White Store, Pinoka-Mayodan, and Mayodan-Creedmoor-Claycreek general soil map units formed in materials weathered from sedimentary Triassic rocks, such as sandstone, shale, mudstone, and siltstone. The Ailey-Emporia-Candor general soil map unit formed in material derived from sandy, loamy, and clayey marine sediments. The Chewacla-Shellbluff-Riverview general soil map unit formed in materials derived from recent alluvium. The Tetotum-Hornsboro-McQueen general soil map unit formed in materials derived from old alluvium.

Parent material is largely responsible for the chemical and mineralogical composition of soils and for the major differences among the soils of the county. Major differences in parent material, such as differences in texture, can be observed in the field. Less distinct differences, such as differences in mineralogical composition, can be determined only by careful laboratory analysis.

Climate

Climate, particularly precipitation and temperature, affects the physical, chemical, and biological relationships in the soil. It influences the rate at which rocks weather and organic matter decomposes. The amount of leaching in a soil is related to the amount of rainfall and the movement of water through the soil. The effects of climate also control the kinds of plants and animals living in and on the soil. Temperature influences the kind and growth of organisms and the speed of chemical and physical reactions in the soil.

Anson County has a warm, humid climate. It occupies a moderate plateau ranging in elevation from about 85 to 636 feet. The climate favors rapid chemical processes, which result in the decomposition of organic matter and the weathering of rocks. The effects of climate are reflected in the soils of the county. Mild temperatures throughout the year and abundant rainfall have resulted in the depletion of organic matter and considerable leaching of soluble bases. Because variations in the climate of the county are small, climate has probably not caused major local differences among soils. Climate has mainly affected the formation of soils in Anson County by altering the parent material through changes in temperature and in the amount of precipitation and through influences on plant and animal life.

Plant and Animal Life

Plants and animals influence the formation and differentiation of soil horizons. The type and number of organisms in and on the soil are determined in part by climate and in part by the nature of the soil material, relief, and the age of the soil. Bacteria, fungi, and other micro-organisms aid in the weathering of rocks and in the decomposition of organic matter. The plants and animals that live on a soil are the primary source of organic material.

Plants largely determine the kinds and amounts of organic matter that are added to a soil under normal conditions and the way in which the organic matter is added. They also are important for the changes of base status and for the leaching process of a soil.

Animals convert complex compounds into simpler forms, add organic matter to the soil, and modify certain chemical and physical properties of soil. In Anson County most of the organic material accumulates on the surface. It is acted upon by micro-organisms, fungi, earthworms, and other forms of life and by direct chemical reaction. It is mixed with the uppermost mineral part of the soil by the activities of earthworms and other small invertebrates.

Under the native forest of this county, not enough bases were brought to the surface by plants to counteract the effects of leaching. Generally, the soils of the county developed under a hardwood forest. Trees took up elements from the subsoil and added organic matter to the soil by depositing leaves, roots, twigs, and other plant remains on the surface. The material deposited on the surface was acted upon by organisms and underwent chemical reaction.

Organic material decomposes rapidly in the county because of the moderate temperature, the abundant moisture supply, and the character of the organic material. It decays so rapidly that little of it accumulates in the soil.

Relief

Relief causes differences in free drainage, surface runoff, soil temperature, and the extent of geologic erosion. Relief in Anson County is largely determined by the kind of underlying bedrock, the geology of the area, and the extent that the landscape is dissected by streams.

Relief affects the percolation of water through the profile. Water movement through the profile is important in soil development because it aids chemical reactions and is necessary for leaching.

Slopes in the county range from 0 to 45 percent. The upland soils that have slopes of less than 8 percent generally have deeper, better defined profiles than the steeper soils. Examples are the well developed Cecil, Georgeville, and Mayodan soils.

Relief affects the depth of soils. On some soils that have slopes of 15 percent, geologic erosion removes soil material almost as fast as it forms. As a result, most of the strongly sloping to steep soils have a thin solum. Examples are Goldston and Pacolet soils. These soils are not so deep to saprolite nor so well developed as the less sloping soils.

Relief also affects drainage. For example, a high water table usually occurs in nearly level and gently sloping areas. Creedmoor and White Store soils on uplands are moderately well drained and somewhat poorly drained because they are gently sloping and water moves through them slowly.

Soils at the lower elevations are less sloping and receive runoff from the adjacent higher areas. This runoff tends to accumulate in the nearly level to slightly concave areas. The somewhat poorly drained Chewacla soils and the poorly drained Johnston soils on flood plains are in these areas.

Time

The length of time that soil material has been exposed to the soil-forming processes accounts for some differences between soils. The formation of a well defined profile, however, also depends on other factors. Less time is required for a profile to develop in coarse textured material than in similar but finer textured material, even if the environment is the same for both materials. Less time is required for a profile to develop in an area, such as Anson County, that is warm and humid and has a dense plant cover than in a cold, dry area that has a sparse plant cover.

Soils vary considerably in age. The length of time that a soil has been forming is generally reflected in the profile. Old soils generally have better defined horizons than young soils. In Anson County, the effects of time as a soil-forming factor are more apparent in the older soils that are in the broader parts of the uplands. Examples are Cecil and Creedmoor soils. These soils have well defined horizons. In contrast, young soils, such as Riverview and Shellbluff soils, formed in recent alluvium on flood plains and have not been in place long enough to develop as completely as McQueen and Hornsboro soils.

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Glossary

Access road. A road constructed to facilitate the use and management of the land. Access roads are designed for limited traffic and typically consist of a cut slope, a roadbed, and a fill outslope.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

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.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces. Generally, cool aspects are north- to east-facing and warm aspects are south- to west-facing.

Atterberg limits. Atterberg limits are measured for soil materials passing the No. 40 sieve. They include the liquid limit (LL), which is the moisture content at which the soil passes from a plastic to a liquid state, and the plasticity index (PI), which is the water content corresponding to an arbitrary limit between the plastic and semisolid states of consistency of a soil.

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

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Basic rock. An igneous rock composed dominantly of dark minerals. The minerals of this rock are comparatively low in silica and rich in bases, such as amphiboles, pyroxenes, biotite, and olivine.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Borrow pit. An open excavation from which the soil and underlying material have been removed, generally for use in road construction. Borrow pits support few or no plants without major reclamation. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Bouldery spot. An area where 0.01 to 0.1 percent of the surface is covered by rock fragments larger than 24 inches in diameter. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Buffer zone. The area that extends from the boundary of the soil survey to 500 feet outside the boundary. It appears on the soil maps.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that is, 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.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clayey. A general textural term that includes sandy clay, silty clay, and clay. According to family level criteria in the soil taxonomic system, a specific textural name referring to fine earth (particles less than 2 millimeters in size) containing 35 percent or more clay, by weight, within the control section. The content of rock fragments is less than 35 percent, by volume.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

CMAI (cumulative mean annual increment). The age or rotation at which growing stock of a forest produces the greatest annual growth (for that time period). It is the age at which periodic annual growth and mean annual growth are equal.

Coarse fragments. If round, mineral or rock particles 2 millimeters to 25 centimeters (10 inches) in diameter; if flat, mineral or rock particles (flagstone) 15 to 38 centimeters (6 to 15 inches) long.

Coarse textured soil. Sand or loamy sand.

Coastal Plain. The physiographic region of eastern North Carolina that consists of ocean-deposited sediments of sand, silt, and clay. These sediments are in level to rolling areas and vary in thickness.

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 is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse-grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Dbh (diameter at breast height). The diameter of a tree at 4.5 feet above the ground level on the uphill side.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delineation. The process of drawing or plotting features on a map with lines and symbols.

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.

Depression (depressional area). A portion of land surrounded on all sides by higher land. These areas generally do not have outlets for drainage.

Depth class. Refers to the depth to a root-restricting layer. Unless otherwise stated, this layer is understood to be consolidated bedrock. The depth classes in this survey are:

Very shallow	less than 10 inches
Shallow	10 to 20 inches
Moderately deep	20 to 40 inches
Deep	40 to 60 inches
Very deep	more than 60 inches

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.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Diabase. A rock of basaltic composition consisting primarily of labradorite and pyroxene and characterized by ophitic texture.

Dike. A long, narrow cross-cutting mass of igneous rock that extends to or crops out on the land surface.

Diorite. A coarse-grained igneous rock with the composition of andesite (no quartz or orthoclase). It is composed of about 75 percent plagioclase feldspars with the balance being ferromagnesian silicates.

Dispersion (soils). The breakup of compound particles, such as soil aggregates or saprolite, into single grains, resulting in a highly erosive condition. This phenomenon results from the failure of grains to adhere or bond to one another and generally is associated with a high water content in soil containing high levels of sodium.

Dispersive material. Soil material generally associated with high levels of sodium that causes a breakup of compound particles, such as soil aggregates or saprolite, into single grains resulting in a highly erosive condition.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

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.

Engineering index test data. Laboratory test and mechanical analysis of selected soils in the county.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Eroded (soil phase). Because of erosion, the soil has lost an average of 25 to 75 percent of the original A horizon or the uppermost 2 to 6 inches if the original A horizon was less than 8 inches thick.

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.

Erosion classes. Classes based on estimates of past erosion. The classes are as follows:

Class 1.—Soils that have lost some of the original A horizon but on the average less than 25 percent of the original A horizon or of the uppermost 8 inches (if the original A horizon was less than 8 inches thick). Throughout most areas, the thickness of the surface layer is within the normal range of variability of the uneroded soil. Class 1 erosion typically is not designated in the name of the map unit or in the map symbol.

Class 2.—Soils that have lost an average of 25 to 75 percent of the original A horizon or of the uppermost 8 inches (if the original A horizon was less than 8 inches thick). Throughout most cultivated areas of class 2 erosion, the surface layer consists of a mixture of the original A horizon and material from below. Some areas may have intricate patterns ranging from uneroded spots to spots where all of the original A horizon has been removed.

Class 3.—Soils that have lost an average of 75 percent or more of the original A horizon or of the uppermost 8 inches (if the original A horizon was less than 8 inches thick). In most cultivated areas of class 3 erosion, material that was below the original A horizon is exposed. The plow layer consists entirely or largely of this material.

Class 4.—Soils that have lost all of the original A horizon or of the uppermost 8 inches (if the original A horizon was less than 8 inches thick) plus some or all of the deeper horizons throughout most of the area. The original soil can be identified only in spots. Some areas may be smooth, but most have an intricate pattern of gullies.

Erosion hazard. A term describing the potential for future erosion, inherent in the soil itself, in inadequately protected areas. The following definitions are based on estimated annual soil loss in metric tons per hectare (values determined by the Universal Soil Loss Equation assuming bare soil conditions and using rainfall and climate factors for North Carolina):

0 tons per hectare	none
Less than 2.5 tons per hectare	slight
2.5 to 10 tons per hectare	moderate
10 to 25 tons per hectare	severe
More than 25 tons per hectare	very severe

Evapotranspiration. The combined loss of water from a given area through surface evaporation and through transpiration by plants during a specified period.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Fall Line. The boundary between the Coastal Plain and Piedmont physiographic regions. The line is a zone of transition and varies considerably in width. The uplands are commonly Coastal Plain sediments, and the bottom of stream channels is hard Piedmont rock. The prevalence of falls in the rocky channels prompted the term "fall line."

Fast intake (in tables). The rapid movement of water into the soil.

Felsic rock. A general term for light-colored igneous rock and some metamorphic crystalline rock that have an abundance of quartz, feldspars, feldspathoids, and muscovite mica.

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 border. A strip of perennial vegetation (trees, shrubs, or herbaceous plants) established on the edge of a field to control erosion, provide travel lanes for farm machinery, control competition from adjacent woodland, or provide food and cover for wildlife.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flat. A general term for a level or nearly level surface or small area of land marked by little or no relief.

Flooding. The temporary covering of the soil surface by flowing water from any source, such as overflowing streams, runoff from adjacent or surrounding slopes, and inflow from high tides. The frequency of flooding generally is expressed as none, rare, occasional, or frequent. *None* means that flooding is not probable. *Rare* means that flooding is unlikely but possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year). *Occasional* means that flooding occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year). *Frequent* means that flooding occurs often under normal weather conditions (the chance of flooding is more than 50 percent in any year). The duration of flooding is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 days to 1 month), and *very long* (more than 1 month).

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foot slope. The inclined surface at the base of a hill.

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 which differentiate it from other stands.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphic surface. A part of the surface of the land that represents an episode of landscape development and consists of one or more landforms. It is a mappable part of the land surface that is defined in terms of morphology (relief, slope, aspect, etc.); origin (erosional, constructional, etc.); age (absolute or relative); and stability of component landforms.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Gneiss. A coarse-grained metamorphic rock in which bands rich in granular minerals alternate with bands that are predominantly schistose minerals. It is commonly formed by the metamorphism of granite.

Granite. A coarse-grained igneous rock dominated by light-colored minerals, consisting of about 50 percent orthoclase and 25 percent quartz with the balance being plagioclase feldspars and ferromagnesian silicates. Granites and granodiorites comprise 95 percent of all intrusive rocks.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Gravelly spot. An area of soils where the content of rock fragments generally less than 3 inches in diameter is more than 15 percent, by volume, in the surface layer, occurring in a map unit in which the surface layer of the dominant soil or soils has less than 15 percent gravel. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Gravel pit. An open excavation in which the soil and underlying material are used as a source of sand and gravel. The excavated material is not crushed for use. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A very small channel with steep sides cut by running water and through which water ordinarily runs only after rainfall, icemelt, or snowmelt. 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. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

High-grade metamorphic rocks. Highly metamorphosed rocks, such as gneiss and schist.

High water table (seasonal). The highest level of a saturated zone in the soil (the apparent or perched water table) over a continuous period of more than 2 weeks in most years, but not a permanent water table.

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 horizon 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 are depth to a high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are 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.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermediate rock. Igneous or metamorphic crystalline rock that is intermediate in composition between mafic and felsic rock.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Interstream divide (or interstream area). The nearly level land between drainageways in relatively undissected parts of the Coastal Plain. It is in areas on uplands, low marine terraces, and stream terraces. Soils in these areas are generally poorly drained or very poorly drained.

Iron depletions. Low-chroma zones that have a low content of iron and manganese oxide because of chemical reduction and removal but also have a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Kaolinite. An aluminosilicate clay mineral with a 1:1 layer structure; that is, a silicon tetrahedral sheet alternating with an aluminum octahedral sheet. Little or no expansion occurs when water mixes with the clay.

Knoll. A small, low, rounded hill rising above adjacent landforms.

Landfill. An area of accumulated wastes produced by human activities. These areas can be above or below the natural ground level. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

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.

Loamy. A general textural term that includes coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, clay loam, and sandy clay loam. According to family level criteria in the soil taxonomic system, a specific textural name referring to fine earth (particles less than 2 millimeters in size) of loamy very fine sand or finer textured material that contains more than 15 percent fine sand or coarser sand and less than 35 percent clay, by weight, within the control section. The content of rock fragments is less than 35 percent, by volume.

Low stream terrace. A terrace in an area that floods, commonly 3 to 10 feet higher in elevation than the adjacent flood plain.

Low strength. The soil is not strong enough to support loads.

Mafic rock. A dark rock composed predominantly of magnesium silicates. It can contain small amounts of quartz, feldspar, or muscovite mica.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mean annual increment. The average annual volume of a stand of trees from the year of origin to the age under consideration.

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. Nearly all such rocks are crystalline.

Metasedimentary rock. Metamorphosed sedimentary rocks, such as phyllite, metasandstone, and conglomerate.

Mine or quarry (map symbol). An open excavation from which the soil and underlying material have been removed, exposing bedrock; or the surface opening to underground mines. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil (mottles). Irregular spots of different colors that vary in number and size. They result from impeded drainage and poor aeration or as a result of weathering of geologic material. Redoximorphic features are a type of mottle resulting from conditions of wetness. Lithochromic or lithomorphic mottles are mottles which retain colors of the original geologic materials. 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).

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

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.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. The downward-sloping convex end of a main ridge or spur ridge.

No-till planting. A method of planting crops in which there is virtually no seedbed preparation. A thin slice of the soil is opened, and the seed is planted at the desired depth.

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

Overstory. The portion of the trees in a forest stand forming the upper crown cover.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Perennial stream. A stream, or reach of a stream, that flows continuously throughout the year.

Perennial water. An area that generally provides water for human or livestock consumption; commonly a lake, pond, river, or stream. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piedmont. The physiographic region of central North Carolina characterized by rolling landscapes formed from the weathering of residual rock material.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pits, quarry. A small borrow area or pit (usually less than 5 acres in size) where soil, gravel, or stone has been removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay and quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is also exposed to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse-grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. They indicate chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. They indicate the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation. Descriptive terms for concentrations and depletions 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).

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Reforestation. The process in which tree seedlings are planted or become naturally established in an area that was once forested.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Ridge. A long, narrow elevation of the land surface, usually having a sharp crest and steep sides.

Rippable. Rippable bedrock or hardpan can be excavated using a single-tooth ripping attachment mounted on a tractor with a 200-300 drawbar horsepower rating.

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.

Rock outcrop. An area of exposed bedrock in a map unit that has less than 0.1 percent exposed bedrock. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Runoff class (surface). Refers to the rate at which water flows away from the soil over the surface without infiltrating. Six classes of rate of runoff are recognized:

Ponded.—Little of the precipitation and water that runs onto the soil escapes as runoff, and free water stands on the surface for significant periods. The amount of water that is removed from ponded areas by movement through the soil, by plants, or by evaporation is usually greater than the total rainfall. Ponding normally occurs on level and nearly level soils in depressions. The water depth may fluctuate greatly.

Very slow.—Surface water flows away slowly, and free water stands on the surface for long periods or immediately enters the soil. Most of the water passes through the soil, is used by plants, or evaporates. The soils are commonly level or nearly level or are very porous.

Slow.—Surface water flows away so slowly that free water stands on the surface for moderate periods or enters the soil rapidly. Most of the water passes through the soil, is used by plants, or evaporates. The soils are nearly level or very gently sloping, or they are steeper but absorb precipitation very rapidly.

Medium.—Surface water flows away so rapidly that free water stands on the surface for only short periods. Part of the precipitation enters the soil and is used by plants, is lost by evaporation, or moves into underground channels. The soils are nearly level or gently sloping and absorb precipitation at a moderate rate, or they are steeper but absorb water rapidly.

Rapid.—Surface water flows away so rapidly that the period of concentration is brief and free water does not stand on the surface. Only a small part of the water enters the soil. The soils are mainly moderately steep or steep and have moderate or slow rates of absorption.

Very rapid.—Surface water flows away so rapidly that the period of concentration is very brief and free water does not stand on the surface. Only a small part of the water enters the soil. The soils are mainly steep or very steep and absorb precipitation slowly.

Sand. As a soil separate, individual rock or mineral fragments ranging 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.

Sandy. A general textural term that includes coarse sand, sand, fine sand, very fine sand, loamy coarse sand, loamy sand, loamy fine sand, and loamy very fine sand. According to family level criteria in the soil taxonomic system, a specific textural name referring to fine earth (particles less than 2 millimeters in size) of sand or loamy sand that contains less than 50 percent very fine sand, by weight, within the control section. The content of rock fragments is less than 35 percent, by volume.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

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.

Schist. A metamorphic rock that is dominantly fibrous or platy minerals. It has schistose cleavage and is a product of regional metamorphism.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Severely eroded spot. An area of soil that has lost an average of 75 percent or more of the original surface layer because of accelerated erosion, occurring in a map unit in which the dominant soil or soils have lost less than 25 percent of the original surface layer. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Short, steep slope. An area of soils that are at least two slope classes steeper than the named soils in the surrounding map unit. Areas identified on the detailed soil maps by a special symbol typically are long, narrow bands that are less than 2 acres in size. (See Slope.)

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.

Shrink-swell potential. The potential for volume change in a soil with a loss or gain in moisture. Shrink-swell potential classes are based on the linear extensibility of the soil. If the soil has a linear extensibility of less than 3 percent, the shrink-swell potential is low; 3 to 6 percent, the shrink-swell potential is moderate; 6 to 9 percent, the shrink-swell potential is high; and more than 9 percent, the shrink-swell potential is very high.

Side slope. The landscape position that is directly below the shoulder and directly above the toe slope. It makes up most of the mountainside or hillside.

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.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

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.

Skidding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most systems involve pulling the trees with wire cables attached to a bulldozer or a rubber-tired tractor. Generally, felled trees are skidded or pulled with one end lifted to reduce friction and soil disturbance.

Skid trails. The paths left by skidding logs and the bulldozer or tractor used to pull them.

Slate. A fine-grained metamorphic rock with well developed slaty cleavage. Formed by the low-grade regional metamorphism of shale.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 30 percent
Steep	30 to 50 percent

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Smectite. An aluminosilicate clay mineral with 2:1 layer structure; that is, two silicon tetrahedral sheets enclosing an aluminum octahedral sheet. Considerable expansion may occur when water mixes with the clay.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil compaction. An alteration of soil structure that ultimately can affect the biological and chemical properties of the soil. Compaction decreases the extent of voids and increases bulk density.

Soil map unit. A kind of soil or miscellaneous area or a combination of two or more soils or one or more soils and one or more miscellaneous areas that can be shown at the scale of mapping for the defined purposes and objectives of the soil survey. Soil map units generally are designed to reflect significant differences in use and management among the soils of a survey area.

Soil sample site (map symbol). The location of a typifying pedon in the survey area.

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

Soil strength. The load-supporting capacity of a soil at specific moisture and density conditions.

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.

Spoil area. An area where earthy material has been piled and either smoothed or left uneven. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Stand density. The degree to which an area is covered with living trees. It is usually expressed in units of basal areas per acre, number of trees per acre, or the percentage of ground covered by the tree canopy as viewed from above.

Stone line. A concentration of rock fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

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.

Stony spot. An area where 0.01 to 0.1 percent of the surface is covered by rock fragments larger than 10 inches in diameter. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to soil blowing and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsurface layer. Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.

Suitability ratings. Ratings for the degree of suitability of soils for pasture, crops, woodland, and engineering uses. The ratings and the general criteria used for their selection are as follows:

Well suited.—The intended use may be initiated and maintained by using only the standard materials and methods typically required for that use. Good results can be expected.

Suited or moderately suited.—The limitations affecting the intended use make special planning, design, or maintenance necessary.

Poorly suited.—The intended use is difficult or costly to initiate and maintain because of certain soil properties, such as steep slopes, a severe hazard of erosion, a high water table, low fertility, and a hazard of flooding. Major soil reclamation, special design, or intensive management practices are needed.

Very poorly suited, not suited, or unsuited.—The intended use is very difficult or costly to initiate and maintain, and thus it generally should not be undertaken.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine." The textural classes are defined as follows:

Sands (coarse sand, sand, fine sand, and very fine sand).—Soil material in which the content of sand is 85 percent or more and the percentage of silt plus 1 1/2 times the percentage of clay does not exceed 15.

Loamy sands (loamy coarse sand, loamy sand, loamy fine sand, and loamy very fine sand).—Soil material in which, at the upper limit, the content of sand is 85 to 90 percent and the percentage of silt plus 1 1/2 times the percentage of clay is not less than 15; at the lower limit, the content of sand is 70 to 85 percent and the percentage of silt plus twice the percentage of clay does not exceed 30.

Sandy loams (coarse sandy loam, sandy loam, fine sandy loam, and very fine sandy loam).—Soil material in which the content of clay is 20 percent or less, the percentage of silt plus twice the percentage of clay exceeds 30, and the content of sand is 52 percent or more or soil material in which the content of clay is less than 7 percent, the content of silt is less than 50 percent, and the content of sand is 43 to 52 percent.

Loam.—Soil material that contains 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

Silt loam.—Soil material that contains 50 percent or more silt and 12 to 27 percent clay or 50 to 80 percent silt and less than 12 percent clay.

Silt.—Soil material that contains 80 percent or more silt and less than 12 percent clay.

Sandy clay loam.—Soil material that contains 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more sand.

Clay loam.—Soil material that contains 27 to 40 percent clay and 20 to 45 percent sand.

Silty clay loam.—Soil material that contains 27 to 40 percent clay and less than 20 percent sand.

Sandy clay.—Soil material that contains 35 percent or more clay and 45 percent or more sand.

Silty clay.—Soil material that contains 40 percent or more clay and 40 percent or more silt.

Clay.—Soil material that contains 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

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.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Topography. The relative positions and elevations of the natural or manmade features of an area that describe the configuration of its surface.

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.

Toxicity (in tables). Excessive amounts of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Triassic. The earliest of the three geologic periods comprising the Mesozoic era; approximately 225 million years ago to 180 million years ago.

Underlying material. Technically the C horizon; the part of the soil below the biologically altered A and B horizons.

Understory. The trees and other woody species growing under a more or less continuous cover of branches and foliage formed collectively by the upper portions of adjacent trees and other woody growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Very bouldery spot. An area where 0.1 to 3.0 percent of the surface is covered by rock fragments larger than 24 inches in diameter. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Very stony spot. An area where 0.1 to 3.0 percent of the surface is covered by rock fragments larger than 10 inches in diameter. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and to divert water off and away from the road surface. Water bars can be easily driven over if they are constructed properly.

Water table (apparent). A thick zone of free water in the soil. The apparent water table is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil.

Water table (perched). A saturated zone of water in the soil standing above an unsaturated zone.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wetness. A general term applied to soils that hold water at or near the surface long enough to be a common management problem.

Wet spot. An area of somewhat poorly drained to very poorly drained soils that are at least two drainage classes wetter than the named soils in the surrounding map unit. Areas identified on the detailed soil maps by a special symbol typically are less than 2 acres in size. (See Drainage class.)

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Yield (forest land). The volume of wood fiber from trees harvested in a certain unit of area. Yield is usually measured in board feet or cubic feet per acre.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-90 at Wadesboro, North Carolina)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	50.6	30.0	40.3	74	7	27	4.22	2.50	5.75	7	1.5
February----	54.8	32.3	43.6	78	13	46	3.98	2.00	5.71	6	2.0
March-------	63.9	40.6	52.2	85	21	156	4.51	2.64	6.18	7	.8
April-------	73.3	48.9	61.1	91	30	343	2.65	1.19	3.91	5	.0
May---------	80.4	57.3	68.9	94	39	585	3.95	2.22	5.49	6	.0
June--------	86.7	65.0	75.9	99	50	776	4.28	2.08	6.19	6	.0
July--------	89.7	68.9	79.3	100	58	907	5.26	2.73	7.47	8	.0
August------	88.6	68.1	78.3	100	56	877	4.67	2.18	6.80	6	.0
September---	83.3	61.8	72.6	96	45	677	3.72	1.17	5.80	4	.0
October-----	73.7	49.4	61.6	89	30	366	3.42	1.02	5.36	4	.0
November----	64.7	41.5	53.1	82	22	159	2.92	1.43	4.22	4	.1
December----	54.4	33.4	43.9	75	13	49	3.45	1.90	4.82	6	.6
Yearly:											
Average---	72.0	49.8	60.9	---	---	---	---	---	---	---	
Extreme---	107	-4	---	102	6	---	---	---	---	---	
Total-----	---	---	---	---	---	4,970	47.04	40.72	52.89	69	5.0

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Wadesboro, North Carolina)

Probability	Temperature 24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Mar. 17	Mar. 31	Apr. 11
2 years in 10 later than--	Mar. 10	Mar. 25	Apr. 6
5 years in 10 later than--	Feb. 26	Mar. 15	Mar. 28
First freezing temperature in fall:			
1 year in 10 earlier than--	Nov. 13	Nov. 1	Oct. 17
2 years in 10 earlier than--	Nov. 21	Nov. 8	Oct. 24
5 years in 10 earlier than--	Dec. 6	Nov. 19	Nov. 5

Table 3.--Growing Season

(Recorded in the period 1961-90 at Wadesboro, North Carolina)

Probability	Daily minimum temperature during growing season: Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	248	224	197
8 years in 10	260	232	205
5 years in 10	283	248	222
2 years in 10	306	263	238
1 year in 10	318	271	246

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AeB	Ailey loamy sand, 2 to 8 percent slopes	9,938	2.9
AeC	Ailey loamy sand, 8 to 15 percent slopes	2,445	0.7
BaB	Badin channery silt loam, 2 to 8 percent slopes	15,331	4.5
BaC	Badin channery silt loam, 8 to 15 percent slopes	12,225	3.6
BdB2	Badin silty clay loam, 2 to 8 percent slopes, moderately eroded	4,505	1.3
BdC2	Badin silty clay loam, 8 to 15 percent slopes, moderately eroded	4,500	1.3
BgB	Badin-Goldston complex, 2 to 8 percent slopes	8,000	2.3
BgC	Badin-Goldston complex, 8 to 15 percent slopes	3,722	1.1
BgD	Badin-Goldston complex, 15 to 25 percent slopes	4,760	1.4
CaB	Candor sand, 1 to 8 percent slopes	3,763	1.1
CaC	Candor sand, 8 to 15 percent slopes	550	0.2
CeB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded	1,535	0.4
CeC2	Cecil sandy clay loam, 8 to 15 percent slopes, moderately eroded	1,309	0.4
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded	26,855	7.8
CmA	Chewacla and Chastain soils, 0 to 2 percent slopes, frequently flooded	10,122	2.9
CnA	Claycreek fine sandy loam, 0 to 2 percent slopes	3,936	1.1
CrB	Creedmoor fine sandy loam, 2 to 8 percent slopes	12,948	3.8
DAM	Dam	25	*
DoA	Dothan loamy sand, 0 to 2 percent slopes	2,510	0.7
EmB	Emporia loamy sand, 2 to 6 percent slopes	7,586	2.2
EmC	Emporia loamy sand, 6 to 10 percent slopes	2,600	0.8
FuA	Fuquay loamy sand, 0 to 3 percent slopes	2,060	0.6
GeB2	Georgeville silty clay loam, 2 to 8 percent slopes, moderately eroded	1,650	0.5
GoB	Goldston channery silt loam, 2 to 8 percent slopes	14,800	4.3
GoC	Goldston channery silt loam, 8 to 15 percent slopes	8,600	2.5
GoD	Goldston channery silt loam, 15 to 25 percent slopes	6,200	1.8
GoE	Goldston channery silt loam, 25 to 45 percent slopes	2,352	0.7
GrB	Granville sandy loam, 2 to 8 percent slopes	1,537	0.4
HeB2	Hiwassee clay loam, 2 to 8 percent slopes, moderately eroded	567	0.2
HeC2	Hiwassee clay loam, 8 to 15 percent slopes, moderately eroded	763	0.2
HeD2	Hiwassee clay loam, 15 to 30 percent slopes, moderately eroded	550	0.2
HoA	Hornsboro silt loam, 0 to 2 percent slopes, rarely flooded	2,100	0.6
IrB	Iredell fine sandy loam, 1 to 6 percent slopes	822	0.2
JoA	Johnston sandy loam, 0 to 2 percent slopes, frequently flooded	2,200	0.6
LgB	Lillington gravelly sandy loam, 2 to 8 percent slopes	1,840	0.5
LgC	Lillington gravelly sandy loam, 8 to 15 percent slopes	1,062	0.3
MaB	Mayodan fine sandy loam, 2 to 8 percent slopes	10,392	3.0
MaC	Mayodan fine sandy loam, 8 to 15 percent slopes	3,275	1.0
MgB	Mayodan gravelly sandy loam, 2 to 8 percent slopes	7,007	2.0
MgC	Mayodan gravelly sandy loam, 8 to 15 percent slopes	4,366	1.3
MgD	Mayodan gravelly sandy loam, 15 to 25 percent slopes	1,500	0.4
MnC	Mayodan-Urban land complex, 4 to 10 percent slopes	1,810	0.5
MrB	McQueen loam, 1 to 6 percent slopes	1,817	0.5
MsA	Misenheimer-Callison complex, 0 to 3 percent slopes	2,435	0.7
NaB	Nanford silt loam, 2 to 8 percent slopes	1,292	0.4
NaC	Nanford silt loam, 8 to 15 percent slopes	186	0.1
NgC	Nanford gravelly fine sandy loam, 8 to 15 percent slopes	850	0.2
NsB	Nanford-Emporia complex, 2 to 8 percent slopes	1,700	0.5
PgB	Pacolet gravelly sandy loam, 2 to 8 percent slopes	6,498	1.9
PgC	Pacolet gravelly sandy loam, 8 to 15 percent slopes	14,566	4.2
PgD	Pacolet gravelly sandy loam, 15 to 25 percent slopes	10,839	3.2
PgE	Pacolet gravelly sandy loam, 25 to 45 percent slopes	4,467	1.3
PmB2	Pacolet clay loam, 2 to 8 percent slopes, moderately eroded	1,463	0.4
PmC2	Pacolet clay loam, 8 to 15 percent slopes, moderately eroded	3,246	0.9
PnB	Pelion loamy sand, 1 to 4 percent slopes	1,440	0.4
PoB	Pinoka-Carbonton complex, 2 to 8 percent slopes	4,345	1.3
PsC	Pinoka fine sandy loam, 8 to 15 percent slopes	5,849	1.7
PsD	Pinoka fine sandy loam, 15 to 30 percent slopes	2,200	0.6
PwB3	Polkton-White Store complex, 2 to 8 percent slopes, severely eroded	20,972	6.1
PwC3	Polkton-White Store complex, 8 to 15 percent slopes, severely eroded	8,818	2.6

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
PwD3	Polkton-White Store complex, 15 to 25 percent slopes, severely eroded	625	0.2
RaA	Rains fine sandy loam, 0 to 2 percent slopes	482	0.1
RmA	Riverview loam, 0 to 2 percent slopes, occasionally flooded	1,236	0.4
RoA	Roanoke loam, 0 to 2 percent slopes, rarely flooded	179	0.1
RwB	Rock outcrop-Wake complex, 2 to 8 percent slopes	100	*
ShA	Shellbluff loam, 0 to 2 percent slopes, occasionally flooded	2,772	0.8
StA	State fine sandy loam, 0 to 2 percent slopes, rarely flooded	598	0.2
TaB	Tarrus gravelly silt loam, 2 to 8 percent slopes	4,290	1.2
TgC	Tarrus-Georgeville complex, 8 to 15 percent slopes	1,933	0.6
ToA	Tetotum silt loam, 0 to 3 percent slopes	2,207	0.6
UdC	Udorthents, loamy, 0 to 15 percent slopes	3,200	0.9
VaB	Vaucluse loamy sand, 2 to 8 percent slopes	520	0.2
VgC	Vaucluse very gravelly loamy sand, 8 to 15 percent slopes	490	0.1
VgD	Vaucluse very gravelly loamy sand, 15 to 25 percent slopes	646	0.2
W	Water	6,033	1.8
WaB2	Wadesboro clay loam, 2 to 8 percent slopes, moderately eroded	357	0.1
WaC2	Wadesboro clay loam, 8 to 15 percent slopes, moderately eroded	373	0.1
WcB	Wakulla sand, 1 to 8 percent slopes	1,566	0.5
WhB2	White Store fine sandy loam, 2 to 8 percent slopes, moderately eroded	6,628	1.9
WhC2	White Store fine sandy loam, 8 to 15 percent slopes, moderately eroded	537	0.2
WoA	Worsham loam, 0 to 3 percent slopes	421	0.1
WxB	Wynott loam, 2 to 8 percent slopes	191	0.1
WyC	Wynott cobbly loam, 2 to 10 percent slopes, extremely stony	848	0.2
	Total	343,833	100.0

* Less than 0.1 percent.

Table 5.—Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Land capability	Corn	Soybeans	Wheat	Tobacco	Oats	Tall fescue	Cotton	Coastal bermudagrass
		Bu	Bu	Bu	Lbs	Bu	Tons	Lbs	Tons
AeB------------- Ailey	IVs	45	18	---	---	---	---	400	6.0
AeC------------- Ailey	VIs	---	---	---	---	---	---	350	6.0
BaB------------- Badin	IIIe	110	38	50	---	---	3.9	---	---
BaC------------- Badin	IVe	110	38	50	---	---	3.6	---	---
BdB2------------ Badin	IVe	108	38	50	---	---	3.3	---	---
BdC2------------ Badin	VIe	100	34	48	---	---	3.0	---	---
BgB:									
Badin----------	IIIe	110	38	50	---	---	3.9	---	---
Goldston-------	IVs	84	30	39	---	---	---	---	---
BgC:									
Badin----------	IVe	100	34	48	---	---	3.6	---	---
Goldston-------	IVs	84	30	39	---	---	---	---	---
BgD:									
Badin----------	VIe	65	15	25	---	---	3.3	---	---
Goldston-------	VIIs	---	---	---	---	---	---	---	---
CaB, CaC-------- Candor	IVs	40	15	---	1,300	---	3.8	---	---
CeB2------------ Cecil	IIIe	70	25	---	---	70	3.8	500	---
CeC2------------ Cecil	IVe	60	---	---	---	60	3.6	---	---
ChA------------- Chewacla	IVw	109	42	30	---	40	---	---	---
CmA:									
Chewacla-------	IVw	109	42	30	---	40	---	---	---
Chastain-------	VIIw	---	---	---	---	---	---	---	---
CnA------------- Claycreek	IIw	103	40	35	---	75	4.2	---	---
CrB------------- Creedmoor	IIe	96	40	45	2,200	75	3.9	600	---

See footnote at end of table.

Table 5.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Soil name and map symbol	Land capability	Corn	Soybeans	Wheat	Tobacco	Oats	Tall fescue	Cotton	Coastal bermudagrass
		Bu	Bu	Bu	Lbs	Bu	Tons	Lbs	Tons
DAM*. Dam									
DoA------------- Dothan	I	120	40	---	2,800	---	---	900	5.8
EmB------------- Emporia	IIe	100	30	50	2,900	---	---	600	5.0
EmC------------- Emporia	IIIe	90	25	45	2,700	---	---	550	4.6
FuA------------- Fuquay	IIs	85	30	---	2,400	60	---	650	5.1
GeB2------------ Georgeville	IIIe	110	40	50	---	65	3.5	525	---
GoB, GoC-------- Goldston	IVs	84	30	39	---	---	2.8	---	---
GoD------------- Goldston	VIIs	---	---	---	---	---	---	---	---
GoE------------- Goldston	VIIIs	---	---	---	---	---	---	---	---
GrB------------- Granville	IIe	85	---	---	2,200	75	---	700	---
HeB2------------ Hiwassee	IIIe	110	44	55	---	70	4.6	450	---
HeC2------------ Hiwassee	IVe	80	---	---	---	---	---	---	---
HeD2------------ Hiwassee	VIe	---	---	---	---	---	---	---	---
HoA------------- Hornsboro	IIIw	120	45	---	---	70	5.4	---	---
IrB------------- Iredell	IIe	65	---	---	---	65	4.0	---	---
JoA------------- Johnston	VIIw	---	---	---	---	---	---	---	---
LgB------------- Lillington	IIIs	80	30	---	2,100	70	5.0	650	---
LgC------------- Lillington	IVs	70	25	---	1,900	60	4.5	500	---
MaB------------- Mayodan	IIe	95	37	48	2,100	85	4.8	650	---
MaC------------- Mayodan	IVe	85	---	---	1,900	60	4.2	500	---

See footnote at end of table.

Table 5.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Soil name and map symbol	Land capability	Corn	Soybeans	Wheat	Tobacco	Oats	Tall fescue	Cotton	Coastal bermudagrass
		Bu	Bu	Bu	Lbs	Bu	Tons	Lbs	Tons
MgB------------- Mayodan	IIe	95	---	---	2,100	85	4.0	650	---
MgC------------- Mayodan	IVe	75	---	---	1,900	60	3.8	500	---
MgD------------- Mayodan	VIe	---	---	---	---	---	3.6	---	---
MnC*:									
Mayodan--------	IIIe	85	---	---	2,000	75	---	600	---
Urban land-----	VIIIs	---	---	---	---	---	---	---	---
MrB------------- McQueen	IIe	100	35	40	---	---	5.0	900	---
MsA:									
Misenheimer----	IIIw	60	20	30	---	---	3.0	---	---
Callison-------	IIw	95	35	42	---	60	4.0	---	---
NaB------------- Nanford	IIe	90	30	43	---	70	4.8	---	4.8
NaC------------- Nanford	IIIe	85	30	43	---	65	4.2	---	4.2
NgC------------- Nanford	IIIe	85	30	45	---	65	4.2	---	4.2
NsB:									
Nanford--------	IIe	90	30	45	---	70	---	---	---
Emporia--------	IIe	100	30	50	2,900	---	---	600	5.0
PgB------------- Pacolet	IIe	80	---	---	2,200	---	3.9	700	3.9
PgC------------- Pacolet	IVe	65	---	---	1,400	---	3.6	550	3.6
PgD------------- Pacolet	VIe	---	---	---	---	---	3.3	---	3.3
PgE------------- Pacolet	VIIe	---	---	---	---	---	---	---	---
PmB2------------ Pacolet	IIIe	75	---	---	1,900	---	6.0	500	---
PmC2------------ Pacolet	VIe	---	---	---	---	---	4.5	---	---
PnB------------- Pelion	IIe	60	25	---	---	---	4.0	500	4.8

See footnote at end of table.

Table 5.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Soil name and map symbol	Land capability	Corn	Soybeans	Wheat	Tobacco	Oats	Tall fescue	Cotton	Coastal bermudagrass
		Bu	Bu	Bu	Lbs	Bu	Tons	Lbs	Tons
PoB:									
Pinoka----------	IIIe	80	30	44	---	80	3.5	300	---
Carbonton------	IIe	80	---	---	---	---	---	---	---
PsC------------- Pinoka	IVe	65	---	30	---	65	---	300	---
PsD------------- Pinoka	VIe	---	---	---	---	---	2.5	---	---
PwB3:									
Polkton--------	IVe	85	35	---	---	50	2.5	---	---
White Store----	IVe	85	35	50	1,700	60	3.5	500	---
PwC3:									
Polkton--------	VIe	---	---	---	---	---	---	---	---
White Store----	VIe	---	---	---	---	---	---	---	---
PwD3:									
Polkton--------	VIe	---	---	---	---	---	---	---	---
White Store----	VIe	---	---	---	---	---	---	---	---
RaA------------- Rains	IIIw	110	40	---	2,300	70	5.4	450	---
RmA------------- Riverview	IIw	130	45	55	---	90	5.6	---	---
RoA------------- Roanoke	IVw	---	---	---	---	---	---	---	---
RwB*:									
Rock outcrop.									
Wake-----------	IVs	30	---	---	---	40	---	---	---
ShA------------- Shellbluff	IIw	150	45	55	---	70	5.0	---	---
StA------------- State	I	130	45	60	3,000	---	5.1	---	---
TaB------------- Tarrus	IIe	100	36	50	---	70	4.8	---	---
TgC:									
Tarrus---------	IIIe	90	34	45	---	65	4.4	---	---
Georgeville----	IVe	110	40	50	---	10	3.5	---	---
ToA------------- Tetotum	IIw	150	40	45	---	---	5.1	---	---
UdC------------- Udorthents	VIIs	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 5.—Land Capability and Yields per Acre of Crops and Pasture—Continued

Soil name and map symbol	Land capability	Corn	Soybeans	Wheat	Tobacco	Oats	Tall fescue	Cotton	Coastal bermudagrass
		Bu	Bu	Bu	Lbs	Bu	Tons	Lbs	Tons
VaB------------- Vaucluse	IIIs	65	25	---	---	60	---	500	4.8
VgC------------- Vaucluse	IVe	50	15	---	---	40	---	350	4.2
VgD------------- Vaucluse	VIe	---	---	---	---	---	---	---	4.0
W*. Water									
WaB2------------ Wadesboro	IIe	90	35	---	1,600	80	4.8	---	---
WaC2------------ Wadesboro	IVe	80	30	---	1,300	70	4.4	---	---
WcB------------- Wakulla	IIIs	45	20	---	1,700	---	---	---	3.8
WhB2------------ White Store	IIIe	90	35	50	1,800	70	3.0	650	---
WhC2------------ White Store	IVe	---	---	---	---	---	2.8	500	---
WoA------------- Worsham	IVw	70	30	35	---	60	---	---	---
WxB------------- Wynott	IIIe	85	30	40	---	---	---	---	---
WyC------------- Wynott	VIs	---	---	---	---	---	---	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 6.—Capability Classes and Subclasses

(Miscellaneous areas are excluded. Absence of an entry indicates no acreage)

Class	Total acreage	Major management concerns (Subclass) Erosion (e)	Wetness (w)	Soil problem (s)
		Acres	Acres	Acres
I	3,108	---	---	---
II	77,572	64,314	11,198	2,060
III	63,752	55,857	3,969	3,926
IV	133,736	55,995	33,123	44,618
V	---	---	---	---
VI	33,854	30,561	---	3,293
VII	19,414	4,467	6,653	8,294
VIII	3,132	---	---	3,132

Table 7.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
CeB2	Cecil sandy clay loam, 2 to 8 percent slopes, moderately eroded
ChA	Chewacla loam, 0 to 2 percent slopes, frequently flooded (where drained and protected from flooding)
CnA	Claycreek fine sandy loam, 0 to 2 percent slopes
CrB	Creedmoor fine sandy loam, 2 to 8 percent slopes
DoA	Dothan loamy sand, 0 to 2 percent slopes
EmB	Emporia loamy sand, 2 to 6 percent slopes
GeB2	Georgeville silty clay loam, 2 to 8 percent slopes, moderately eroded
GrB	Granville sandy loam, 2 to 8 percent slopes
HeB2	Hiwassee clay loam, 2 to 8 percent slopes, moderately eroded
MaB	Mayodan fine sandy loam, 2 to 8 percent slopes
MgB	Mayodan gravelly sandy loam, 2 to 8 percent slopes
MrB	McQueen loam, 1 to 6 percent slopes
NaB	Nanford silt loam, 2 to 8 percent slopes
NsB	Nanford-Emporia complex, 2 to 8 percent slopes
PgB	Pacolet gravelly sandy loam, 2 to 8 percent slopes
PmB2	Pacolet clay loam, 2 to 8 percent slopes, moderately eroded
PnB	Pelion loamy sand, 1 to 4 percent slopes
RaA	Rains fine sandy loam, 0 to 2 percent slopes (where drained)
RmA	Riverview loam, 0 to 2 percent slopes, occasionally flooded
ShA	Shellbluff loam, 0 to 2 percent slopes, occasionally flooded
StA	State fine sandy loam, 0 to 2 percent slopes, rarely flooded
TaB	Tarrus gravelly silt loam, 2 to 8 percent slopes
ToA	Tetotum silt loam, 0 to 3 percent slopes
WaB2	Wadesboro clay loam, 2 to 8 percent slopes, moderately eroded

Table 8.—Woodland Management and Productivity

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index[2]	Potential productivity: Volume[3]	Trees to manage[4]
AeB, AeC-------- Ailey	9S	Slight	Moderate	Moderate	Moderate	Loblolly pine-------	88	127	Loblolly pine, longleaf pine.
						Longleaf pine-------	63	63	
BaB, BaC-------- Badin	8D	Slight	Slight	Slight	Moderate	Loblolly pine-------	80	110	Loblolly pine, shortleaf pine.
						Shortleaf pine------	69	108	
						Virginia pine-------	---	---	
						Yellow-poplar-------	---	---	
						White oak-----------	68	50	
						Scarlet oak---------	---	---	
						Chestnut oak--------	---	---	
BdB2, BdC2------ Badin	6D	Moderate	Moderate	Moderate	Moderate	Loblolly pine-------	80	110	Loblolly pine, shortleaf pine.
						Shortleaf pine------	69	108	
						White oak-----------	68	68	
						Scarlet oak---------	---	---	
						Chestnut oak--------	---	---	
						Virginia pine-------	---	---	
BgB5, BgC5:									
Badin----------	8D	Slight	Slight	Slight	Moderate	Loblolly pine-------	80	110	Loblolly pine, shortleaf pine.
						Shortleaf pine------	69	108	
						Virginia pine-------	---	---	
						Yellow-poplar-------	---	---	
						White oak-----------	68	50	
						Scarlet oak---------	---	---	
						Chestnut oak--------	---	---	
Goldston-------	7D	Slight	Slight	Moderate	Severe	Loblolly pine-------	76	103	Loblolly pine.
						Shortleaf pine------	60	88	
						Southern red oak----	64	47	
						White oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Virginia pine-------	---	---	
						Red maple-----------	---	---	
BgD5:									
Badin----------	8R	Moderate	Moderate	Slight	Moderate	Loblolly pine-------	80	110	Loblolly pine, shortleaf pine.
						Shortleaf pine------	69	108	
						Virginia pine-------	---	---	
						Yellow-poplar-------	---	---	
						White oak-----------	68	50	
						Scarlet oak---------	---	---	
						Chestnut oak--------	---	---	
Goldston-------	7D	Moderate	Moderate	Moderate	Severe	Loblolly pine-------	76	103	Loblolly pine.
						Shortleaf pine------	60	88	
						Southern red oak----	64	47	
						White oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Virginia pine-------	---	---	
						Red maple-----------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index[2]	Volume[3]	Trees to manage[4]
CaB, CaC--------Candor	4S	Slight	Moderate	Moderate	Slight	Longleaf pine-------	58	52	Longleaf pine.
						Loblolly pine-------	---	---	
						Turkey oak----------	---	---	
						Blackjack oak-------	---	---	
						Post oak------------	---	---	
CeB2, CeC2------Cecil	7C	Slight	Moderate	Moderate	Slight	Loblolly pine-------	77	105	Loblolly pine.
						Shortleaf pine------	62	92	
						Virginia pine-------	68	105	
						White oak-----------	69	49	
						Northern red oak----	---	---	
ChA-------------Chewacla	7W	Slight	Moderate	Slight	Moderate	Yellow-poplar-------	96	100	Yellow-poplar, loblolly pine, sweetgum, American sycamore, green ash.
						Loblolly pine-------	95	142	
						Sweetgum------------	100	138	
						Water oak-----------	90	86	
						Eastern cottonwood--	---	---	
						Green ash-----------	78	46	
						Southern red oak----	---	---	
						Blackgum------------	---	---	
						Red maple-----------	---	---	
						Willow oak----------	90	86	
						American beech------	---	---	
						American sycamore---	97	116	
CmA[5]:									
Chewacla-------	7W	Slight	Moderate	Slight	Moderate	Yellow-poplar-------	96	100	Yellow-poplar, loblolly pine, sweetgum, American sycamore, green ash.
						Loblolly pine-------	95	142	
						Sweetgum------------	100	138	
						Water oak-----------	90	86	
						Eastern cottonwood--	---	---	
						Green ash-----------	78	46	
						Southern red oak----	---	---	
						Blackgum------------	---	---	
						Red maple-----------	---	---	
						Willow oak----------	90	86	
						American beech------	---	---	
						American sycamore---	97	116	
Chastain-------	9W	Slight	Severe	Severe	Severe	Sweetgum------------	98	132	Sweetgum, baldcypress.
						Baldcypress---------	---	---	
						Water tupelo--------	---	---	
						Water oak-----------	---	---	
CnA-------------Claycreek	10W	Slight	Slight	Slight	Slight	Loblolly pine-------	95	142	Loblolly pine, sweetgum, yellow-poplar.
						Shortleaf pine------	---	---	
						Sweetgum------------	---	---	
						Red maple-----------	---	---	
						Blackgum------------	---	---	
						Water oak-----------	---	---	
						Yellow-poplar-------	---	---	
CrB-------------Creedmoor	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	87	125	Loblolly pine, shortleaf pine.
						Yellow-poplar-------	97	102	
						Virginia pine-------	---	---	
						Shortleaf pine------	66	101	
						Sweetgum------------	---	---	
						Water oak-----------	---	---	
						Red maple-----------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index[2]	Potential productivity: Volume[3]	Trees to manage[4]
DAM[5]. Dam									
DoA------------- Dothan	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	88	127	Loblolly pine, longleaf pine.
						Longleaf pine-------	---	---	
						Hickory-------------	---	---	
						Water oak-----------	---	---	
EmB, EmC-------- Emporia	9S	Slight	Slight	Moderate	Slight	Loblolly pine-------	87	125	Loblolly pine, longleaf pine.
						Longleaf pine-------	---	---	
						Southern red oak----	---	---	
FuA------------- Fuquay	8S	Slight	Moderate	Moderate	Slight	Loblolly pine-------	85	120	Loblolly pine, longleaf pine.
						Longleaf pine-------	59	54	
GeB2------------ Georgeville	8C	Slight	Moderate	Moderate	Slight	Loblolly pine-------	81	112	Loblolly pine.
						Shortleaf pine------	71	112	
GoB, GoC-------- Goldston	7D	Slight	Slight	Moderate	Severe	Loblolly pine-------	76	103	Loblolly pine.
						Shortleaf pine------	60	88	
						Southern red oak----	64	47	
						White oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Virginia pine-------	---	---	
						Red maple-----------	---	---	
GoD------------- Goldston	7D	Moderate	Moderate	Moderate	Severe	Loblolly pine-------	76	103	Loblolly pine.
						Shortleaf pine------	60	88	
						Southern red oak----	64	47	
						White oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Virginia pine-------	---	---	
						Red maple-----------	---	---	
GoE------------- Goldston	7R	Severe	Severe	Moderate	Severe	Loblolly pine-------	76	103	Loblolly pine.
						Shortleaf pine------	60	88	
						Southern red oak----	64	47	
						White oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Virginia pine-------	---	---	
						Red maple-----------	---	---	
GrB------------- Granville	8A	Slight	Slight	Slight	Slight	Loblolly pine-------	79	108	Loblolly pine.
						Shortleaf pine------	---	---	
						Virginia pine-------	---	---	
						Southern red oak----	---	---	
						White oak-----------	---	---	
						Black oak-----------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	
						Red maple-----------	---	---	
						Sweetgum------------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index[2]	Volume[3]	Trees to manage[4]
HeB2, HeC2------ Hiwassee	10C	Slight	Moderate	Moderate	Slight	Loblolly pine-------	94	140	Loblolly pine, shortleaf pine.
						Shortleaf pine------	---	---	
						Northern red oak----	---	---	
						White oak-----------	---	---	
						Southern red oak----	---	---	
HeD2------------ Hiwassee	10R	Moderate	Moderate	Moderate	Slight	Loblolly pine-------	94	140	Loblolly pine, shortleaf pine.
						Shortleaf pine------	---	---	
						Northern red oak----	---	---	
						White oak-----------	---	---	
						Southern red oak----	---	---	
HoA------------- Hornsboro	9W	Slight	Moderate	Moderate	Slight	Loblolly pine-------	90	131	Loblolly pine.
						Sweetgum------------	---	---	
						Blackgum------------	---	---	
						Water oak-----------	---	---	
						Swamp chestnut oak--	---	---	
						Willow oak----------	---	---	
						Southern red oak----	---	---	
						White oak-----------	---	---	
						Yellow-poplar-------	---	---	
						Red maple-----------	---	---	
IrB------------- Iredell	7C	Slight	Moderate	Moderate	Slight	Loblolly pine-------	72	96	Loblolly pine, eastern redcedar.
						Shortleaf pine------	52	72	
						Post oak------------	---	---	
						White oak-----------	---	---	
JoA------------- Johnston	7W	Slight	Severe	Severe	Severe	Yellow-poplar-------	94	97	Green ash, sweetgum, baldcypress, yellow-poplar.
						Loblolly pine-------	---	---	
						Sweetgum------------	94	119	
						Water oak-----------	---	---	
						Water tupelo--------	---	---	
						Swamp tupelo--------	---	---	
						Baldcypress---------	---	---	
LgB, LgC-------- Lillington	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	86	123	Loblolly pine.
						Shortleaf pine------	60	88	
						Longleaf pine-------	61	57	
						White oak-----------	---	---	
						Southern red oak----	---	---	
						Sweetgum------------	---	---	
MaB, MaC, MgB, MgC------------ Mayodan	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	88	127	Loblolly pine, shortleaf pine.
						Shortleaf pine------	63	95	
						Virginia pine-------	74	114	
						White oak-----------	74	53	
						Yellow-poplar-------	---	---	
						Sweetgum------------	---	---	
						Southern red oak----	---	---	
						Black oak-----------	---	---	
						Hickory-------------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index[2]	Potential productivity: Volume[3]	Trees to manage[4]
MgD------------- Mayodan	9R	Moderate	Moderate	Slight	Slight	Loblolly pine-------	88	127	Loblolly pine, shortleaf pine.
						Shortleaf pine------	63	95	
						Virginia pine-------	74	114	
						White oak-----------	74	53	
						Yellow-poplar-------	---	---	
						Sweetgum------------	---	---	
						Southern red oak----	---	---	
						Black oak-----------	---	---	
						Hickory-------------	---	---	
MnC[5]. Mayodan-Urban land									
MrB------------- McQueen	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	95	142	Loblolly pine, yellow-poplar, black walnut.
						Southern red oak----	---	---	
						Yellow-poplar-------	---	---	
						Hickory-------------	---	---	
						White oak-----------	---	---	
						American beech------	---	---	
MsA[5]:									
Misenheimer----	6D	Slight	Moderate	Moderate	Severe	Shortleaf pine------	58	84	Shortleaf pine.
						White oak-----------	59	42	
						Willow oak----------	---	---	
						Sweetgum------------	---	---	
						Red maple-----------	---	---	
						Blackgum------------	---	---	
						Hickory-------------	---	---	
						Post oak------------	---	---	
						Blackjack oak-------	---	---	
Callison-------	7W	Slight	Slight	Slight	Slight	Loblolly pine-------	77	105	Loblolly pine, shortleaf pine.
						Red maple-----------	---	---	
						Sweetgum------------	---	---	
						Willow oak----------	---	---	
						Black cherry--------	---	---	
						Hickory-------------	---	---	
						Shortleaf pine------	64	97	
NaB, NaC-------- Nanford	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	90	131	Loblolly pine.
						Northern red oak----	---	---	
						Virginia pine-------	---	---	
						Shortleaf pine------	---	---	
NgC------------- Nanford	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	90	131	Loblolly pine.
						Northern red oak----	---	---	
						Virginia pine-------	---	---	
						Shortleaf pine------	---	---	
NsB[5]:									
Nanford--------	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	90	131	Loblolly pine.
						Northern red oak----	---	---	
						Virginia pine-------	---	---	
						Shortleaf pine------	---	---	
Emporia--------	9S	Slight	Slight	Moderate	Slight	Loblolly pine-------	87	125	Loblolly pine, longleaf pine.
						Longleaf pine-------	---	---	
						Southern red oak----	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index[2]	Volume[3]	Trees to manage[4]
PgB, PgC: Pacolet	8A	Slight	Slight	Slight	Slight	Loblolly pine	79	108	Loblolly pine, shortleaf pine, yellow-poplar.
						Shortleaf pine	68	106	
						Yellow-poplar	90	90	
						Virginia pine	71	110	
						Southern red oak	71	53	
						Hickory	---	---	
						White oak	72	54	
PgD: Pacolet	8R	Moderate	Moderate	Slight	Slight	Loblolly pine	79	108	Loblolly pine, shortleaf pine, yellow-poplar.
						Shortleaf pine	68	106	
						Yellow-poplar	90	90	
						Virginia pine	71	110	
						Southern red oak	71	53	
						Hickory	---	---	
						White oak	72	54	
PgE: Pacolet	8R	Severe	Severe	Slight	Slight	Loblolly pine	79	108	Loblolly pine, shortleaf pine, yellow-poplar.
						Shortleaf pine	68	106	
						Yellow-poplar	90	90	
						Virginia pine	71	110	
						Southern red oak	71	53	
						Hickory	---	---	
						White oak	72	54	
PmB2, PmC2: Pacolet	8C	Slight	Moderate	Moderate	Slight	Loblolly pine	79	108	Loblolly pine, shortleaf pine, yellow-poplar.
						Shortleaf pine	68	106	
						Yellow-poplar	90	90	
PnB: Pelion	9W	Slight	Moderate	Slight	Moderate	Loblolly pine	90	131	Loblolly pine.
PoB[5]:									
Pinoka	8D	Slight	Slight	Moderate	Moderate	Loblolly pine	81	112	Loblolly pine, shortleaf pine.
						Southern red oak	---	---	
						Virginia pine	---	---	
						Shortleaf pine	---	---	
Carbonton	8W	Slight	Slight	Moderate	Moderate	Loblolly pine	81	112	Loblolly pine, shortleaf pine.
						Shortleaf pine	---	---	
						Southern red oak	---	---	
PsC: Pinoka	8D	Slight	Slight	Moderate	Moderate	Loblolly pine	81	112	Loblolly pine, shortleaf pine.
						Southern red oak	---	---	
						Virginia pine	---	---	
						Shortleaf pine	---	---	
PsD: Pinoka	8D	Moderate	Moderate	Severe	Moderate	Loblolly pine	81	112	Loblolly pine, shortleaf pine.
						Southern red oak	---	---	
						Virginia pine	---	---	
						Shortleaf pine	---	---	
PwB3[5]:									
Polkton	8D	Moderate	Moderate	Moderate	Moderate	Loblolly pine	81	112	Loblolly pine.
						Sweetgum	---	---	
						Southern red oak	---	---	
						White oak	---	---	
						Willow oak	---	---	
						Red maple	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index[2]	Volume[3]	Trees to manage[4]
PwB3[5]:									
White Store----	9C	Moderate	Moderate	Moderate	Slight	Loblolly pine-------	87	125	Loblolly pine.
						Virginia pine-------	---	---	
						Eastern redcedar----	---	---	
						White oak-----------	---	---	
						Post oak------------	---	---	
PwC3[5]:									
Polkton--------	8D	Moderate	Moderate	Moderate	Moderate	Loblolly pine-------	81	112	Loblolly pine.
						Sweetgum------------	---	---	
						Southern red oak----	---	---	
						White oak-----------	---	---	
						Willow oak----------	---	---	
						Red maple-----------	---	---	
White Store----	9C	Severe	Moderate	Moderate	Slight	Loblolly pine-------	87	125	Loblolly pine.
						Virginia pine-------	---	---	
						Eastern redcedar----	---	---	
						White oak-----------	---	---	
						Post oak------------	---	---	
PwD3[5]:									
Polkton--------	8D	Severe	Severe	Severe	Moderate	Loblolly pine-------	81	112	Loblolly pine.
						Sweetgum------------	---	---	
						Southern red oak----	---	---	
						White oak-----------	---	---	
						Willow oak----------	---	---	
						Red maple-----------	---	---	
White Store----	9C	Severe	Moderate	Moderate	Slight	Loblolly pine-------	87	125	Loblolly pine.
						Virginia pine-------	---	---	
						Eastern redcedar----	---	---	
						White oak-----------	---	---	
						Post oak------------	---	---	
RaA------------- Rains	9W	Slight	Moderate	Moderate	Severe	Loblolly pine-------	90	131	Loblolly pine, sweetgum.
						Sweetgum------------	---	---	
RmA------------- Riverview	12A	Slight	Slight	Slight	Slight	Loblolly pine-------	110	177	Loblolly pine, yellow-poplar, sweetgum, eastern cottonwood, American sycamore.
						Yellow-poplar-------	98	104	
						Sweetgum------------	96	125	
RoA------------- Roanoke	7W	Slight	Severe	Severe	Slight	Sweetgum------------	---	---	Sweetgum.
						Willow oak----------	---	---	
						White oak-----------	---	---	
RwB[5]:									
Rock outcrop.									
Wake-----------	6D	Slight	Slight	Moderate	Severe	Loblolly pine-------	69	91	Loblolly pine.
						Shortleaf pine------	---	---	
						Virginia pine-------	---	---	
						Post oak------------	---	---	
						Hickory-------------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Windthrow hazard	Potential productivity: Common trees	Potential productivity: Site index[2]	Potential productivity: Volume[3]	Trees to manage[4]
ShA------------- Shellbluff	12A	Slight	Slight	Slight	Slight	Loblolly pine-------	110	177	Loblolly pine.
						Sweetgum-----------	96	125	
						Yellow-poplar-------	98	104	
						Cherrybark oak------	---	---	
						Eastern cottonwood--	---	---	
						Scarlet oak---------	---	---	
						Black walnut--------	---	---	
StA------------- State	10A	Slight	Slight	Slight	Slight	Loblolly pine-------	95	142	Loblolly pine, black walnut, yellow-poplar.
						Southern red oak----	---	---	
						Yellow-poplar-------	---	---	
						Hickory------------	---	---	
						American beech------	---	---	
						White oak----------	---	---	
TaB------------- Tarrus	8A	Slight	Slight	Slight	Slight	Loblolly pine-------	82	114	Loblolly pine, shortleaf pine.
						Virginia pine-------	---	---	
						Shortleaf pine------	72	114	
TgC[5]:									
Tarrus---------	8A	Slight	Slight	Slight	Slight	Loblolly pine-------	82	114	Loblolly pine, shortleaf pine.
						Virginia pine-------	---	---	
						Shortleaf pine------	72	114	
Georgeville----	9A	Slight	Slight	Slight	Slight	Loblolly pine-------	86	123	Loblolly pine, shortleaf pine, longleaf pine.
						Longleaf pine-------	60	56	
						Shortleaf pine------	71	112	
						White oak----------	---	---	
						Scarlet oak---------	---	---	
						Southern red oak----	---	---	
						Virginia pine-------	---	---	
						Hickory------------	---	---	
ToA------------- Tetotum	9A	Slight	Moderate	Slight	Slight	Loblolly pine-------	87	125	Loblolly pine.
						Sweetgum-----------	---	---	
						Southern red oak----	---	---	
						Yellow-poplar-------	---	---	
						White oak----------	---	---	
UdC. Udorthents									
VaB------------- Vaucluse	7A	Slight	Slight	Moderate	Moderate	Loblolly pine-------	71	95	Loblolly pine, longleaf pine.
						Longleaf pine-------	55	45	
VgC------------- Vaucluse	7A	Slight	Slight	Moderate	Moderate	Loblolly pine-------	71	95	Loblolly pine, longleaf pine.
						Longleaf pine-------	55	45	
VgD------------- Vaucluse	7A	Moderate	Moderate	Moderate	Moderate	Loblolly pine-------	71	95	Loblolly pine, longleaf pine.
						Longleaf pine-------	55	45	
W[5]. Water									
WaB2, WaC2------ Wadesboro	8C	Slight	Moderate	Moderate	Slight	Loblolly pine-------	80	110	Shortleaf pine, loblolly pine.
						Shortleaf pine------	59	86	
						White oak----------	---	---	
						Yellow-poplar-------	---	---	

See footnotes at end of table.

Table 8.—Woodland Management and Productivity—Continued

Soil name and map symbol	Ordination symbol[1]	Management concerns: Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Potential productivity: Common trees	Site index[2]	Volume[3]	Trees to manage[4]
WcB------------- Wakulla	6S	Slight	Moderate	Moderate	Slight	Longleaf pine------- Loblolly pine------- Blackjack oak------- Post oak-----------	70 79 --- ---	79 108 --- ---	Longleaf pine.
WhB2, WhC2------ White Store	9C	Slight	Moderate	Moderate	Slight	Loblolly pine------- Virginia pine------- Eastern redcedar---- White oak---------- Post oak-----------	87 --- --- --- ---	125 --- --- --- ---	Loblolly pine.
WoA------------- Worsham	9W	Slight	Severe	Severe	Slight	Loblolly pine------- Virginia pine------- Yellow-poplar------- Willow oak----------	89 --- 93 ---	129 --- 95 ---	Loblolly pine, yellow-poplar.
WxB------------- Wynott	7D	Slight	Slight	Slight	Moderate	Loblolly pine------- Sweetgum----------- Southern red oak---- White oak---------- Willow oak---------- Hickory------------ Yellow-poplar------- Shortleaf pine------	75 --- --- --- --- --- --- ---	--- --- --- --- --- --- --- ---	Loblolly pine, shortleaf pine.
WyC------------- Wynott	7X	Slight	Slight	Moderate	Moderate	Loblolly pine------- Sweetgum----------- Southern red oak---- White oak---------- Willow oak---------- Hickory------------ Yellow-poplar------- Shortleaf pine------	75 --- --- --- --- --- --- ---	--- --- --- --- --- --- --- ---	Loblolly pine, shortleaf pine.

[1] The number in the ordination symbol denotes potential productivity, in cubic meters per hectare per year, for a group (range) of site indices for the indicator species (first tree listed under "Common trees"). one cubic meter per hectare per year equals 14.3 cubic feet per acre per year.

[2] Site indices were assigned using available plot data from North Carolina and South Carolina databases. If available plot data was insufficient, indices for some species were derived from a comparison curve (Olson and Della-Bianca, USFS, SEFES Pap. 104) and Foster's Field Handbook, N.C. Forest Service 1982. If no data existed, site index was based on data from soils with similar properties or, in some cases, no site index was assigned.

[3] Volume is the yield in cubic feet per acre per year calculated at the age of culmination of mean annual increment for fully stocked natural stands.

[4] If hardwoods are desired on a forest site, the natural reproduction (seeds and sprouts) of acceptable species should be used. Special site preparation techniques may be needed. Planting hardwoods on a specific site should be based upon the recommendations of a forester.

[5] See description of the map unit for composition and behavior characteristics of the map unit.

Table 9.—Recreational Development

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
AeB------------------- Ailey	Moderate: too sandy.	Moderate: too sandy.	Moderate: slope, too sandy.	Moderate: too sandy.	Moderate: droughty.
AeC------------------- Ailey	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.	Moderate: slope, droughty.
BaB------------------- Badin	Severe: too acid.	Severe: too acid.	Severe: small stones, too acid.	Slight----------	Severe: too acid.
BaC------------------- Badin	Severe: too acid.	Severe: too acid.	Severe: slope, small stones, too acid.	Slight----------	Severe: too acid.
BdB2------------------ Badin	Severe: too acid.	Severe: too acid.	Severe: too acid.	Slight----------	Severe: too acid.
BdC2------------------ Badin	Severe: too acid.	Severe: too acid.	Severe: slope, too acid.	Slight----------	Severe: too acid.
BgB*:					
Badin----------------	Severe: too acid.	Severe: too acid.	Severe: small stones, too acid.	Slight----------	Severe: too acid.
Goldston-------------	Severe: depth to rock.	Severe: too acid.	Severe: small stones, depth to rock.	Slight----------	Severe: depth to rock.
BgC*:					
Badin----------------	Severe: too acid.	Severe: too acid.	Severe: slope, small stones, too acid.	Slight----------	Severe: too acid.
Goldston-------------	Severe: depth to rock.	Severe: too acid.	Severe: slope, small stones, depth to rock.	Slight----------	Severe: depth to rock.
BgD*:					
Badin----------------	Severe: slope, too acid.	Severe: slope, too acid.	Severe: slope, small stones, too acid.	Moderate: slope.	Severe: too acid, slope.
Goldston-------------	Severe: slope, depth to rock.	Severe: slope, too acid.	Severe: slope, small stones, depth to rock.	Moderate: slope.	Severe: slope, depth to rock.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
CaB: Candor	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: too sandy.	Severe: too acid, droughty.
CaC: Candor	Severe: too sandy, too acid.	Severe: too sandy, too acid.	Severe: slope, too sandy, too acid.	Severe: too sandy.	Severe: too acid, droughty.
CeB2: Cecil	Slight	Slight	Moderate: slope, small stones.	Slight	Slight.
CeC2: Cecil	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
ChA: Chewacla	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
CmA*:					
Chewacla	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Chastain	Severe: flooding, wetness.	Severe: wetness, too acid.	Severe: wetness, flooding.	Severe: wetness.	Severe: too acid, wetness, flooding.
CnA: Claycreek	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: small stones, wetness.	Moderate: wetness.	Moderate: wetness.
CrB: Creedmoor	Severe: percs slowly, too acid.	Severe: too acid, percs slowly.	Severe: percs slowly, too acid.	Moderate: wetness.	Severe: too acid.
DAM*. Dam					
DoA: Dothan	Slight	Slight	Slight	Slight	Moderate: droughty.
EmB: Emporia	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones, percs slowly.	Slight	Moderate: droughty.
EmC: Emporia	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Slight	Moderate: droughty, slope.
FuA: Fuquay	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Moderate: droughty.
GeB2: Georgeville	Slight	Slight	Moderate: slope.	Severe: erodes easily.	Slight.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
GoB: Goldston	Severe: depth to rock.	Severe: too acid.	Severe: small stones, depth to rock.	Slight	Severe: depth to rock.
GoC: Goldston	Severe: depth to rock.	Severe: too acid.	Severe: slope, small stones, depth to rock.	Slight	Severe: depth to rock.
GoD: Goldston	Severe: slope, depth to rock.	Severe: slope, too acid.	Severe: slope, small stones, depth to rock.	Moderate: slope.	Severe: slope, depth to rock.
GoE: Goldston	Severe: slope, depth to rock.	Severe: slope, too acid.	Severe: slope, small stones, depth to rock.	Severe: slope.	Severe: slope, depth to rock.
GrB: Granville	Slight	Slight	Moderate: slope.	Slight	Slight.
HeB2: Hiwassee	Slight	Slight	Moderate: slope.	Slight	Slight.
HeC2: Hiwassee	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
HeD2: Hiwassee	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
HoA: Hornsboro	Severe: flooding, wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.
IrB: Iredell	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.
JoA: Johnston	Severe: flooding, ponding.	Severe: ponding.	Severe: ponding, flooding.	Severe: ponding.	Severe: ponding, flooding.
LgB: Lillington	Severe: small stones.	Severe: small stones.	Severe: small stones.	Severe: small stones.	Severe: small stones.
LgC: Lillington	Severe: small stones.	Severe: small stones.	Severe: slope, small stones.	Severe: small stones.	Severe: small stones.
MaB: Mayodan	Slight	Slight	Moderate: slope.	Slight	Slight.
MaC: Mayodan	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
MgB: Mayodan	Moderate: small stones.	Moderate: small stones.	Moderate: slope.	Slight	Moderate: small stones.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
MgC------------------- Mayodan	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope.	Slight----------	Moderate: small stones, slope.
MgD------------------- Mayodan	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
MnC*:					
Mayodan--------------	Slight----------	Slight----------	Severe: slope.	Slight----------	Slight.
Urban land-----------	Variable--------	Variable--------	Variable--------	Variable--------	Variable.
MrB------------------- McQueen	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Severe: erodes easily.	Slight.
MsA*:					
Misenheimer----------	Severe: wetness, depth to rock, too acid.	Severe: too acid, depth to rock.	Severe: small stones, wetness.	Moderate: wetness.	Severe: too acid, depth to rock.
Callison-------------	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: small stones, wetness.	Severe: erodes easily.	Moderate: wetness, depth to rock.
NaB------------------- Nanford	Slight----------	Slight----------	Moderate: slope, small stones.	Slight----------	Slight.
NaC------------------- Nanford	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
NgC------------------- Nanford	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight----------	Moderate: small stones, large stones, slope.
NsB*:					
Nanford--------------	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight----------	Moderate: small stones, large stones.
Emporia--------------	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, small stones, percs slowly.	Slight----------	Moderate: droughty.
PgB------------------- Pacolet	Moderate--------	Moderate--------	Severe: small stones.	Slight----------	Moderate.
PgC------------------- Pacolet	Moderate--------	Moderate--------	Severe: slope, small stones.	Slight----------	Moderate.
PgD------------------- Pacolet	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Moderate: slope.	Severe: slope.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
PgE------------------- Pacolet	Severe: slope.	Severe: slope.	Severe: slope, small stones.	Severe: slope.	Severe: slope.
PmB2------------------ Pacolet	Slight----------	Slight----------	Moderate: slope.	Slight----------	Slight.
PmC2------------------ Pacolet	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight----------	Moderate: slope.
PnB------------------- Pelion	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: droughty.
PoB*:					
Pinoka---------------	Slight----------	Slight----------	Moderate: slope, small stones, depth to rock.	Slight----------	Moderate: droughty, depth to rock.
Carbonton------------	Severe: wetness.	Moderate: wetness.	Severe: slope, wetness.	Moderate: wetness.	Moderate: wetness, depth to rock.
PsC------------------- Pinoka	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight----------	Moderate: droughty, slope, depth to rock.
PsD------------------- Pinoka	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
PwB3*:					
Polkton--------------	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Severe: erodes easily.	Moderate: wetness.
White Store----------	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
PwC3*:					
Polkton--------------	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Moderate: wetness, slope.
White Store----------	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: slope, wetness, percs slowly.	Severe: erodes easily.	Moderate: wetness, slope.
PwD2*:					
Polkton--------------	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Severe: slope.
White Store----------	Severe: slope, wetness, percs slowly.	Severe: slope, percs slowly.	Severe: slope, wetness, percs slowly.	Severe: erodes easily.	Severe: slope.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
RaA: Rains	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
RmA: Riverview	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: flooding.
RoA: Roanoke	Severe: flooding, wetness, too acid.	Severe: wetness, too acid.	Severe: wetness, too acid.	Severe: wetness.	Severe: too acid, wetness.
RwB*: Rock outcrop.					
Wake	Severe: small stones, depth to rock.	Severe: small stones, depth to rock.	Severe: small stones, depth to rock.	Moderate: too sandy.	Severe: small stones, droughty.
ShA: Shellbluff	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: flooding.
StA: State	Severe: flooding.	Slight	Slight	Slight	Slight.
TaB: Tarrus	Moderate: small stones.	Moderate: small stones.	Severe: small stones.	Slight	Moderate: small stones.
TgC*: Tarrus	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight	Moderate: small stones, slope.
Georgeville	Moderate: slope, small stones.	Moderate: slope, small stones.	Severe: slope, small stones.	Slight	Moderate: small stones, large stones.
ToA: Tetotum	Severe: flooding.	Moderate: wetness.	Moderate: small stones, wetness.	Moderate: wetness.	Moderate: wetness.
UdC. Udorthents					
VaB: Vaucluse	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope.	Slight	Moderate: droughty.
VgC: Vaucluse	Moderate: small stones, droughty, slope.	Moderate: slope, small stones.	Severe: slope.	Slight	Moderate: small stones, droughty, slope.
VgD: Vaucluse	Severe: slope.	Severe: slope.	Severe: slope.	Moderate: slope.	Severe: slope.
W*. Water					
WaB2: Wadesboro	Slight	Slight	Moderate: slope.	Slight	Moderate: large stones.

See footnote at end of table.

Table 9.—Recreational Development—Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
WaC2: Wadesboro	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: large stones, slope.
WcB: Wakulla	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: droughty.
WhB2: White Store	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
WhC2: White Store	Severe: wetness, percs slowly.	Severe: percs slowly.	Severe: slope, wetness, percs slowly.	Moderate: wetness.	Moderate: wetness, slope.
WoA: Worsham	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
WxB: Wynott	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, depth to rock.	Slight	Moderate: depth to rock.
WyC: Wynott	Moderate: slope, small stones, percs slowly.	Moderate: slope, small stones, percs slowly.	Severe: slope, small stones.	Slight	Moderate: small stones, large stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 10.—Wildlife Habitat

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
AeB: Ailey	Poor	Poor	Fair	Poor	Poor	Poor	Very poor.	Fair	Poor	Very poor.
AeC: Ailey	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Fair	Poor	Very poor.
BaB: Badin	Fair	Good	Good	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
BaC: Badin	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
BdB2: Badin	Fair	Good	Good	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
BdC2: Badin	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
BgB*:										
Badin	Fair	Good	Good	Good	Good	Poor	Very poor.	Fair	Good	Very poor.
Goldston	Poor	Poor	Fair	Poor	Poor	Poor	Very poor.	Poor	Poor	Very poor.
BgC*:										
Badin	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Goldston	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
BgD*:										
Badin	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Goldston	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
CaB, CaC: Candor	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
CeB2: Cecil	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
CeC2: Cecil	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
ChA: Chewacla	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.

See footnote at end of table.

Table 10.—Wildlife Habitat—Continued

Soil name and map symbol	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
CmA*:										
Chewacla	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair.
Chastain	Very poor.	Poor	Poor	Fair	Poor	Good	Good	Poor	Fair	Good.
CnA Claycreek	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
CrB Creedmoor	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
DAM*. Dam										
DoA Dothan	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
EmB Emporia	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
EmC Emporia	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
FuA Fuquay	Fair	Fair	Good	Fair	Fair	Poor	Very poor.	Good	Fair	Very poor.
GeB2 Georgeville	Fair	Fair	Fair	Good	Fair	Very poor.	Very poor.	Fair	Good	Very poor.
GoB Goldston	Poor	Poor	Fair	Poor	Poor	Poor	Very poor.	Poor	Poor	Very poor.
GoC, GoD Goldston	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
GoE Goldston	Very poor.	Very poor.	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
GrB Granville	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
HeB2 Hiwassee	Fair	Fair	Fair	Fair	Fair	Poor	Very poor.	Fair	Fair	Very poor.
HeC2 Hiwassee	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
HeD2 Hiwassee	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
HoA Hornsboro	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good.
IrB Iredell	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
JoA Johnston	Very poor.	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good.

See footnote at end of table.

Table 10.—Wildlife Habitat—Continued

Soil name and map symbol	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
LgB---------------- Lillington	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
LgC---------------- Lillington	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
MaB---------------- Mayodan	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
MaC---------------- Mayodan	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
MgB---------------- Mayodan	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
MgC---------------- Mayodan	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
MgD---------------- Mayodan	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
MnC*:										
Mayodan-----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Urban land.										
MrB---------------- McQueen	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
MsA*:										
Misenheimer-------	Fair	Good	Good	Fair	Fair	Fair	Fair	Good	Good	Fair.
Callison----------	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
NaB---------------- Nanford	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
NaC---------------- Nanford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
NgC---------------- Nanford	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
NsB*:										
Nanford-----------	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Emporia-----------	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
PgB---------------- Pacolet	Fair	Fair	Fair	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
PgC---------------- Pacolet	Poor	Fair	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.

See footnote at end of table.

Table 10.—Wildlife Habitat—Continued

Soil name and map symbol	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
PgD, PgE----------- Pacolet	Very poor.	Poor	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
PmB2--------------- Pacolet	Poor	Poor	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
PmC2--------------- Pacolet	Very poor.	Poor	Very poor.	Poor	Poor	Very poor.	Very poor.	Very poor.	Poor	Very poor.
PnB---------------- Pelion	Fair	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
PoB*:										
Pinoka------------	Fair	Good	Good	Fair	Fair	Poor	Very poor.	Good	Fair	Very poor.
Carbonton---------	Fair	Fair	Poor	Fair	Poor	Fair	Very poor.	Good	Fair	Poor.
PsC---------------- Pinoka	Fair	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	Very poor.
PsD---------------- Pinoka	Poor	Fair	Good	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
PwB3*:										
Polkton-----------	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
White Store-------	Fair	Good	Good	Fair	Fair	Poor	Very poor.	Good	Fair	Very poor.
PwC3*:										
Polkton-----------	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
White Store-------	Fair	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	Very poor.
PwD3*:										
Polkton-----------	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
White Store-------	Poor	Fair	Good	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
RaA---------------- Rains	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Good	Good.
RmA---------------- Riverview	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
RoA---------------- Roanoke	Poor	Poor	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
RwB*:										
Rock outcrop.										

See footnote at end of table.

Table 10.—Wildlife Habitat—Continued

Soil name and map symbol	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
RwB*:										
Wake	Poor	Poor	Poor	Fair	Fair	Very poor.	Very poor.	Poor	Fair	Very poor.
ShA Shellbluff	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
StA State	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
TaB Tarrus	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
TgC*:										
Tarrus	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Georgeville	Poor	Fair	Good	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
ToA Tetotum	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor.
UdC. Udorthents										
VaB, VgC Vaucluse	Fair	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
VgD Vaucluse	Poor	Fair	Fair	Fair	Fair	Very poor.	Very poor.	Fair	Fair	Very poor.
W*. Water										
WaB2 Wadesboro	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
WaC2 Wadesboro	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
WcB Wakulla	Poor	Poor	Fair	Poor	Poor	Very poor.	Very poor.	Poor	Poor	Very poor.
WhB2 White Store	Fair	Good	Good	Fair	Fair	Poor	Very poor.	Good	Fair	Very poor.
WhC2 White Store	Fair	Good	Good	Fair	Fair	Very poor.	Very poor.	Good	Fair	Very poor.
WoA Worsham	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
WxB Wynott	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
WyC Wynott	Poor	Fair	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 11.—Building Site Development

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
AeB--------------- Ailey	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Moderate: droughty.
AeC--------------- Ailey	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: slope, droughty.
BaB--------------- Badin	Moderate: depth to rock, too clayey.	Moderate: shrink-swell.	Moderate: depth to rock, shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Severe: too acid.
BaC--------------- Badin	Moderate: depth to rock, too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: depth to rock, slope, shrink-swell.	Severe: slope.	Severe: low strength.	Severe: too acid.
BdB2-------------- Badin	Moderate: depth to rock, too clayey.	Moderate: shrink-swell.	Moderate: depth to rock, shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Severe: too acid.
BdC2-------------- Badin	Moderate: depth to rock, too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: depth to rock, slope, shrink-swell.	Severe: slope.	Severe: low strength.	Severe: too acid.
BgB*:						
Badin------------	Moderate: depth to rock, too clayey.	Moderate: shrink-swell.	Moderate: depth to rock, shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Severe: too acid.
Goldston---------	Severe: depth to rock.	Moderate: depth to rock, large stones.	Severe: depth to rock.	Moderate: slope, depth to rock, large stones.	Moderate: depth to rock, large stones.	Severe: depth to rock.
BgC*:						
Badin------------	Moderate: depth to rock, too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: depth to rock, slope, shrink-swell.	Severe: slope.	Severe: low strength.	Severe: too acid.
Goldston---------	Severe: depth to rock.	Moderate: slope, depth to rock, large stones.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope, large stones.	Severe: depth to rock.
BgD*:						
Badin------------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: too acid, slope.
Goldston---------	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope, depth to rock.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
CaB Candor	Severe: cutbanks cave.	Slight	Moderate: wetness.	Moderate: slope.	Slight	Severe: too acid, droughty.
CaC Candor	Severe: cutbanks cave.	Moderate: slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: slope.	Severe: too acid, droughty.
CeB2 Cecil	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Moderate: low strength.	Slight.
CeC2 Cecil	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: low strength, slope.	Moderate: slope.
ChA Chewacla	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
CmA*:						
Chewacla	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Chastain	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: too acid, wetness, flooding.
CnA Claycreek	Severe: wetness.	Moderate: wetness.	Severe: wetness.	Moderate: wetness.	Severe: low strength.	Moderate: wetness.
CrB Creedmoor	Severe: wetness.	Severe: shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Severe: too acid.
DAM*. Dam						
DoA Dothan	Moderate: wetness.	Slight	Moderate: wetness.	Slight	Slight	Moderate: droughty.
EmB Emporia	Moderate: too clayey, wetness.	Slight	Moderate: wetness, shrink-swell.	Moderate: slope.	Moderate: low strength.	Moderate: droughty.
EmC Emporia	Moderate: too clayey, wetness, slope.	Moderate: slope.	Moderate: wetness, slope, shrink-swell.	Severe: slope.	Moderate: low strength, slope.	Moderate: droughty, slope.
FuA Fuquay	Slight	Slight	Moderate: wetness.	Slight	Slight	Moderate: droughty.
GeB2 Georgeville	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Moderate: low strength.	Slight.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
GoB: Goldston	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock, large stones.	Moderate: depth to rock, large stones.	Severe: depth to rock.
GoC: Goldston	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope.	Moderate: depth to rock, slope, large stones.	Severe: depth to rock.
GoD, GoE: Goldston	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope, depth to rock.
GrB: Granville	Slight	Slight	Slight	Moderate: slope.	Slight	Slight.
HeB2: Hiwassee	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Moderate: low strength.	Slight.
HeC2: Hiwassee	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: low strength, slope.	Moderate: slope.
HeD2: Hiwassee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
HoA: Hornsboro	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
IrB: Iredell	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
JoA: Johnston	Severe: cutbanks cave, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, ponding.	Severe: ponding, flooding.	Severe: ponding, flooding.
LgB: Lillington	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: small stones.
LgC: Lillington	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Severe: small stones.
MaB: Mayodan	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Slight.
MaC: Mayodan	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: slope.
MgB: Mayodan	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Moderate: small stones.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
MgC: Mayodan	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: small stones, slope.
MgD: Mayodan	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
MnC*:						
Mayodan	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Slight.
Urban land	Variable	Variable	Variable	Variable	Variable	Variable.
MrB: McQueen	Moderate: too clayey, wetness.	Moderate: shrink-swell.	Moderate: wetness, shrink-swell.	Moderate: shrink-swell, slope.	Moderate: low strength.	Slight.
MsA*:						
Misenheimer	Severe: depth to rock, wetness.	Severe: wetness.	Severe: wetness, depth to rock.	Severe: wetness.	Moderate: depth to rock, wetness.	Severe: too acid, depth to rock.
Callison	Severe: wetness.	Moderate: wetness.	Severe: wetness, depth to rock.	Moderate: wetness.	Severe: low strength.	Moderate: wetness, depth to rock.
NaB: Nanford	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Severe: low strength.	Slight.
NaC: Nanford	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: low strength.	Moderate: slope.
NgC: Nanford	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: low strength.	Moderate: small stones, large stones, slope.
NsB*:						
Nanford	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Severe: low strength.	Moderate: small stones, large stones.
Emporia	Moderate: too clayey, wetness.	Slight	Moderate: wetness, shrink-swell.	Moderate: slope.	Moderate: low strength.	Moderate: droughty.
PgB: Pacolet	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Moderate: low strength.	Moderate.
PgC: Pacolet	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: low strength, slope.	Moderate.
PgD, PgE: Pacolet	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
PmB2: Pacolet	Moderate: too clayey.	Slight	Slight	Moderate: slope.	Moderate: low strength.	Slight.
PmC2: Pacolet	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: low strength, slope.	Moderate: slope.
PnB: Pelion	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: droughty.
PoB*:						
Pinoka	Severe: depth to rock.	Moderate: depth to rock.	Severe: depth to rock.	Moderate: slope, depth to rock.	Moderate: depth to rock.	Moderate: droughty, depth to rock.
Carbonton	Severe: depth to rock, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.
PsC: Pinoka	Severe: depth to rock.	Moderate: slope, depth to rock.	Severe: depth to rock.	Severe: slope.	Moderate: depth to rock, slope.	Moderate: droughty, slope, depth to rock.
PsD: Pinoka	Severe: depth to rock, slope.	Severe: slope.	Severe: depth to rock, slope.	Severe: slope.	Severe: slope.	Severe: slope.
PwB3*:						
Polkton	Severe: wetness.	Severe: shrink-swell, wetness.	Severe: wetness, shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
White Store	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
PwC3*:						
Polkton	Severe: wetness.	Severe: shrink-swell, wetness.	Severe: wetness, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: wetness, slope.
White Store	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: wetness, slope.
PwD3*:						
Polkton	Severe: wetness, slope.	Severe: shrink-swell, slope, wetness.	Severe: wetness, slope, shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
White Store	Severe: wetness, slope.	Severe: wetness, shrink-swell, slope.	Severe: wetness, slope, shrink-swell.	Severe: wetness, shrink-swell, slope.	Severe: shrink-swell, low strength, slope.	Severe: slope.
RaA: Rains	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
RmA--------------- Riverview	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: flooding.
RoA--------------- Roanoke	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness.	Severe: too acid, wetness.
RwB*: Rock outcrop.						
Wake-------------	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: small stones, droughty.
ShA--------------- Shellbluff	Moderate: wetness, flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: low strength, flooding.	Moderate: flooding.
StA--------------- State	Severe: cutbanks cave.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: low strength, flooding.	Slight.
TaB--------------- Tarrus	Moderate: too clayey.	Slight---------	Slight---------	Moderate: slope.	Severe: low strength.	Moderate: small stones.
TgC*: Tarrus-----------	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: low strength.	Moderate: small stones, slope.
Georgeville------	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: low strength, slope.	Moderate: small stones, large stones.
ToA--------------- Tetotum	Severe: cutbanks cave, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding.	Moderate: low strength, wetness.	Moderate: wetness.
UdC. Udorthents						
VaB--------------- Vaucluse	Severe: cutbanks cave.	Slight---------	Slight---------	Moderate: slope.	Slight---------	Moderate: droughty.
VgC--------------- Vaucluse	Moderate: dense layer, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: small stones, droughty, slope.
VgD--------------- Vaucluse	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.
W*. Water						
WaB2-------------- Wadesboro	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Moderate: large stones.

See footnote at end of table.

Table 11.—Building Site Development—Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
WaC2: Wadesboro	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: large stones, slope.
WcB: Wakulla	Severe: cutbanks cave.	Slight	Slight	Moderate: slope.	Slight	Severe: droughty.
WhB2: White Store	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: shrink-swell, low strength.	Moderate: wetness.
WhC2: White Store	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: wetness, slope.
WoA: Worsham	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness.	Severe: wetness.
WxB: Wynott	Moderate: depth to rock, too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: depth to rock.
WyC: Wynott	Moderate: depth to rock, too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: small stones, large stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 12.—Sanitary Facilities

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
AeB----- Ailey	Severe: percs slowly.	Severe: seepage.	Slight	Slight	Good.
AeC----- Ailey	Severe: percs slowly.	Severe: seepage, slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
BaB----- Badin	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
BaC----- Badin	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
BdB2----- Badin	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
BdC2----- Badin	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
BgB*:					
Badin-----	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Goldston-----	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, small stones.
BgC*:					
Badin-----	Severe: depth to rock.	Severe: depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
Goldston-----	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, small stones.
BgD*:					
Badin-----	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope, too clayey.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
BgD*:					
Goldston	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
CaB Candor	Severe: poor filter.	Severe: seepage.	Severe: wetness, too sandy, too acid.	Severe: seepage.	Poor: seepage, too sandy, too acid.
CaC Candor	Severe: poor filter.	Severe: seepage, slope.	Severe: wetness, too sandy, too acid.	Severe: seepage.	Poor: seepage, too sandy, too acid.
CeB2 Cecil	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey, hard to pack.
CeC2 Cecil	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
ChA Chewacla	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: hard to pack, wetness.
CmA*:					
Chewacla	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: hard to pack, wetness.
Chastain	Severe: flooding, wetness, percs slowly.	Severe: seepage, flooding.	Severe: flooding, seepage, wetness.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
CnA Claycreek	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.
CrB Creedmoor	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey, too acid.	Moderate: wetness.	Poor: too clayey, hard to pack, too acid.
DAM*. Dam					
DoA Dothan	Severe: wetness, percs slowly.	Moderate: seepage.	Moderate: wetness.	Slight	Good.
EmB Emporia	Severe: wetness, percs slowly.	Severe: seepage, wetness.	Moderate: wetness, too clayey.	Slight	Fair: too clayey, wetness.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
EmC: Emporia	Severe: wetness, percs slowly.	Severe: seepage, slope, wetness.	Moderate: wetness, slope, too clayey.	Moderate: slope.	Fair: slope, too clayey, wetness.
FuA: Fuquay	Severe: percs slowly, poor filter.	Severe: seepage.	Moderate: too sandy.	Severe: seepage.	Poor: seepage.
GeB2: Georgeville	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey, hard to pack.
GoB: Goldston	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, small stones.
GoC: Goldston	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock.	Poor: depth to rock, small stones.
GoD, GoE: Goldston	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, slope.	Poor: depth to rock, small stones, slope.
GrB: Granville	Moderate: percs slowly.	Severe: seepage.	Moderate: too clayey.	Slight	Fair: too clayey.
HeB2: Hiwassee	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey, hard to pack.
HeC2: Hiwassee	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
HeD2: Hiwassee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
HoA: Hornsboro	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
IrB: Iredell	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
JoA: Johnston	Severe: flooding, ponding, poor filter.	Severe: seepage, flooding, ponding.	Severe: flooding, seepage, ponding.	Severe: flooding, seepage, ponding.	Poor: ponding.
LgB: Lillington	Moderate: percs slowly.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Poor: small stones.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
LgC----------------- Lillington	Moderate: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Poor: small stones.
MaB----------------- Mayodan	Moderate: percs slowly.	Moderate: seepage, slope.	Severe: too clayey.	Slight-----------	Poor: too clayey, hard to pack.
MaC----------------- Mayodan	Moderate: percs slowly, slope.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
MgB----------------- Mayodan	Moderate: percs slowly.	Moderate: seepage, slope.	Severe: too clayey.	Slight-----------	Poor: too clayey, hard to pack.
MgC----------------- Mayodan	Moderate: percs slowly, slope.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
MgD----------------- Mayodan	Severe: slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, hard to pack, slope.
MnC*:					
Mayodan------------	Moderate: percs slowly.	Severe: slope.	Severe: too clayey.	Slight-----------	Poor: too clayey, hard to pack.
Urban land---------	Variable---------	Variable---------	Variable---------	Variable---------	Variable.
MrB----------------- McQueen	Severe: percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Slight-----------	Poor: too clayey.
MsA*:					
Misenheimer--------	Severe: depth to rock, wetness.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage, wetness.	Severe: depth to rock, wetness.	Poor: depth to rock, small stones, wetness.
Callison-----------	Severe: depth to rock, wetness, percs slowly.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock.	Poor: depth to rock.
NaB----------------- Nanford	Moderate: depth to rock, percs slowly.	Moderate: seepage, depth to rock, slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock.	Poor: too clayey, hard to pack.
NaC----------------- Nanford	Moderate: depth to rock, percs slowly, slope.	Severe: slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock, slope.	Poor: too clayey, hard to pack.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
NgC: Nanford	Moderate: depth to rock, percs slowly, slope.	Severe: slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock, slope.	Poor: too clayey, hard to pack.
NsB*:					
Nanford	Moderate: depth to rock, percs slowly.	Moderate: seepage, depth to rock, slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock.	Poor: too clayey, hard to pack.
Emporia	Severe: wetness, percs slowly.	Severe: seepage, slope, wetness.	Moderate: wetness, slope, too clayey.	Slight	Fair: slope, too clayey, wetness.
PgB: Pacolet	Moderate: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Fair: small stones.
PgC: Pacolet	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: small stones, slope.
PgD, PgE: Pacolet	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
PmB2: Pacolet	Moderate: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Fair: too clayey.
PmC2: Pacolet	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: too clayey, slope.
PnB: Pelion	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
PoB*:					
Pinoka	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: depth to rock, small stones.
Carbonton	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Poor: depth to rock, too clayey.
PsC: Pinoka	Severe: depth to rock.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Poor: depth to rock, small stones.
PsD: Pinoka	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, seepage, slope.	Severe: depth to rock, seepage, slope.	Poor: depth to rock, small stones, slope.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
PwB3*:					
Polkton------------	Severe: depth to rock, wetness, percs slowly.	Severe: depth to rock, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
White Store--------	Severe: wetness, percs slowly.	Moderate: depth to rock, slope.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
PwC3*:					
Polkton------------	Severe: depth to rock, wetness, percs slowly.	Severe: depth to rock, slope, wetness.	Severe: depth to rock, wetness.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
White Store--------	Severe: wetness, percs slowly.	Severe: slope.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
PwD3*:					
Polkton------------	Severe: depth to rock, wetness, percs slowly.	Severe: depth to rock, slope, wetness.	Severe: depth to rock, wetness, slope.	Severe: depth to rock, slope.	Poor: depth to rock, too clayey, hard to pack.
White Store--------	Severe: wetness, percs slowly, slope.	Severe: slope.	Severe: depth to rock, wetness, slope.	Severe: wetness, slope.	Poor: too clayey, hard to pack, slope.
RaA----------------- Rains	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
RmA----------------- Riverview	Severe: flooding, wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Fair: thin layer.
RoA----------------- Roanoke	Severe: wetness, percs slowly.	Severe: seepage.	Severe: seepage, wetness.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
RwB*:					
Rock outcrop.					
Wake---------------	Severe: depth to rock.	Severe: seepage, depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Poor: depth to rock, seepage, small stones.
ShA----------------- Shellbluff	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: too clayey, wetness.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
StA------------------ State	Moderate: flooding, wetness, percs slowly.	Severe: seepage.	Severe: seepage, wetness.	Moderate: flooding, wetness.	Fair: too clayey, thin layer.
TaB------------------ Tarrus	Moderate: depth to rock, percs slowly.	Moderate: seepage, depth to rock, slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock.	Poor: too clayey, hard to pack, small stones.
TgC*:					
Tarrus--------------	Moderate: depth to rock, percs slowly, slope.	Severe: slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock, slope.	Poor: too clayey, hard to pack, small stones.
Georgeville---------	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
ToA------------------ Tetotum	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: wetness.	Fair: too clayey, wetness.
UdC. Udorthents					
VaB------------------ Vaucluse	Severe: percs slowly.	Severe: seepage.	Severe: seepage.	Slight-----------	Fair: too clayey.
VgC------------------ Vaucluse	Severe: percs slowly.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: too clayey, slope.
VgD------------------ Vaucluse	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
W*. Water					
WaB2----------------- Wadesboro	Moderate: depth to rock, percs slowly.	Moderate: seepage, depth to rock, slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock.	Poor: too clayey, hard to pack.
WaC2----------------- Wadesboro	Moderate: depth to rock, percs slowly, slope.	Severe: slope.	Severe: depth to rock, too clayey.	Moderate: depth to rock, slope.	Poor: too clayey, hard to pack.
WcB------------------ Wakulla	Severe: poor filter.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Poor: seepage.
WhB2----------------- White Store	Severe: wetness, percs slowly.	Moderate: depth to rock, slope.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.

See footnote at end of table.

Table 12.—Sanitary Facilities—Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
WhC2: White Store	Severe: wetness, percs slowly.	Severe: slope.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
WoA: Worsham	Severe: wetness, percs slowly.	Slight	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
WxB: Wynott	Severe: depth to rock, percs slowly.	Severe: depth to rock.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.
WyC: Wynott	Severe: depth to rock, percs slowly.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, too clayey.	Severe: depth to rock.	Poor: depth to rock, too clayey, hard to pack.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 13.—Construction Materials

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
AeB: Ailey	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy.
AeC: Ailey	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: slope, too sandy.
BaB, BaC, BdB2, BdC2: Badin	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, too acid.
BgB*, BgC*, BgD*:				
Badin	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, too acid.
Goldston	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, too acid.
CaB, CaC: Candor	Good	Improbable: thin layer.	Improbable: too sandy.	Poor: too sandy, too acid.
CeB2, CeC2: Cecil	Fair: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
ChA: Chewacla	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
CmA*:				
Chewacla	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
Chastain	Poor: wetness.	Probable	Improbable: excess fines.	Poor: too clayey, wetness, too acid.
CnA: Claycreek	Fair: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones, thin layer.
CrB: Creedmoor	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, too acid.
DAM*. Dam				

See footnote at end of table.

Table 13.—Construction Materials—Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
DoA Dothan	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: thin layer.
EmB Emporia	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
EmC Emporia	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, slope.
FuA Fuquay	Good	Improbable: thin layer.	Improbable: too sandy.	Fair: too sandy, small stones.
GeB2 Georgeville	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
GoB, GoC, GoD Goldston	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, too acid.
GoE Goldston	Poor: depth to rock, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, too acid.
GrB Granville	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
HeB2, HeC2 Hiwassee	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
HeD2 Hiwassee	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
HoA Hornsboro	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
IrB Iredell	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
JoA Johnston	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
LgB, LgC Lillington	Good	Improbable: excess fines.	Probable	Poor: small stones, area reclaim.
MaB, MaC Mayodan	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

See footnote at end of table.

Table 13.—Construction Materials—Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
MgB, MgC: Mayodan	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
MgD: Mayodan	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
MnC*:				
Mayodan	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Urban land	Variable	Variable	Variable	Variable.
MrB: McQueen	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
MsA*:				
Misenheimer	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: depth to rock, small stones, too acid.
Callison	Poor: depth to rock, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: depth to rock, too clayey, small stones.
NaB, NaC: Nanford	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer, area reclaim.
NgC: Nanford	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, area reclaim.
NsB*:				
Nanford	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, area reclaim.
Emporia	Fair: shrink-swell.	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones.
PgB, PgC: Pacolet	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
PgD: Pacolet	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor.
PgE: Pacolet	Poor: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor.
PmB2, PmC2: Pacolet	Good	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

See footnote at end of table.

Table 13.—Construction Materials—Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
PnB------------------- Pelion	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: small stones, thin layer.
PoB*:				
Pinoka---------------	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
Carbonton-----------	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, thin layer.
PsC------------------- Pinoka	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
PsD------------------- Pinoka	Poor: depth to rock.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones, slope.
PwB3*, PwC3*:				
Polkton--------------	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
White Store----------	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
PwD3*:				
Polkton--------------	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
White Store----------	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, slope.
RaA------------------- Rains	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
RmA------------------- Riverview	Good-----------------	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, thin layer.
RoA------------------- Roanoke	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness, too acid.
RwB*:				
Rock outcrop.				
Wake-----------------	Poor: depth to rock.	Improbable: thin layer.	Improbable: thin layer.	Poor: depth to rock, area reclaim, small stones.

See footnote at end of table.

Table 13.—Construction Materials—Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
ShA------------------- Shellbluff	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
StA------------------- State	Good-----------------	Probable------------	Improbable: too sandy.	Fair: too clayey, area reclaim.
TaB------------------- Tarrus	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, area reclaim.
TgC*:				
Tarrus---------------	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, area reclaim.
Georgeville----------	Good-----------------	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
ToA------------------- Tetotum	Fair: wetness.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.
UdC. Udorthents				
VaB------------------- Vaucluse	Good-----------------	Improbable: excess fines.	Improbable: excess fines.	Fair: area reclaim, too sandy, small stones.
VgC------------------- Vaucluse	Good-----------------	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
VgD------------------- Vaucluse	Fair: slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.
W*. Water				
WaB2, WaC2------------ Wadesboro	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
WcB------------------- Wakulla	Good-----------------	Probable------------	Improbable: too sandy.	Poor: too sandy.
WhB2, WhC2------------ White Store	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
WoA------------------- Worsham	Poor: wetness, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
WxB------------------- Wynott	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: thin layer.

See footnote at end of table.

Table 13.—Construction Materials—Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
WyC-------------------- Wynott	Poor: depth to rock, shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: small stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 14.—Water Management

(Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
AeB: Ailey	Moderate: seepage, slope.	Slight	Deep to water	Droughty, percs slowly, slope.	Too sandy, percs slowly.	Droughty, rooting depth.
AeC: Ailey	Severe: slope.	Slight	Deep to water	Droughty, percs slowly, slope.	Slope, too sandy, percs slowly.	Slope, droughty, rooting depth.
BaB: Badin	Moderate: seepage, depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Depth to rock	Depth to rock.
BaC: Badin	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Slope, depth to rock.	Slope, depth to rock.
BdB2: Badin	Moderate: seepage, depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Depth to rock	Depth to rock.
BdC2: Badin	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Slope, depth to rock.	Slope, depth to rock.
BgB*:						
Badin	Moderate: seepage, depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Depth to rock	Depth to rock.
Goldston	Severe: depth to rock.	Severe: piping, large stones.	Deep to water	Slope, large stones, droughty.	Large stones, depth to rock.	Large stones, droughty.
BgC*, BgD*:						
Badin	Severe: slope.	Severe: thin layer.	Deep to water	Slope, depth to rock, too acid.	Slope, depth to rock.	Slope, depth to rock.
Goldston	Severe: depth to rock, slope.	Severe: piping, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.
CaB: Candor	Severe: seepage.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.
CaC: Candor	Severe: seepage, slope.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Slope, too sandy, soil blowing.	Slope, droughty.

See footnote at end of table.

Table 14.—Water Management—Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
CeB2: Cecil	Moderate: seepage, slope.	Severe: piping, hard to pack.	Deep to water	Slope	Favorable	Favorable.
CeC2: Cecil	Severe: slope.	Severe: piping, hard to pack.	Deep to water	Slope	Slope	Slope.
ChA: Chewacla	Moderate: seepage.	Severe: piping, hard to pack, wetness.	Flooding	Wetness, flooding.	Wetness	Wetness.
CmA*:						
Chewacla	Moderate: seepage.	Severe: piping, hard to pack, wetness.	Flooding	Wetness, flooding.	Wetness	Wetness.
Chastain	Severe: seepage.	Severe: hard to pack, wetness.	Percs slowly, flooding, too acid.	Wetness, percs slowly.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
CnA: Claycreek	Slight	Severe: piping.	Favorable	Wetness, erodes easily.	Erodes easily, wetness.	Erodes easily.
CrB: Creedmoor	Moderate: slope.	Severe: hard to pack.	Percs slowly, slope, too acid.	Slope, wetness, soil blowing.	Wetness, soil blowing.	Rooting depth, percs slowly.
DAM*. Dam						
DoA: Dothan	Moderate: seepage.	Moderate: piping.	Deep to water	Fast intake, droughty.	Favorable	Droughty.
EmB: Emporia	Moderate: seepage, slope.	Moderate: thin layer, piping.	Deep to water	Fast intake, soil blowing, slope.	Soil blowing, percs slowly.	Droughty, percs slowly.
EmC: Emporia	Severe: slope.	Moderate: thin layer, piping.	Deep to water	Fast intake, soil blowing, slope.	Slope, soil blowing, percs slowly.	Slope, droughty, percs slowly.
FuA: Fuquay	Severe: seepage.	Severe: seepage, piping.	Deep to water	Droughty, fast intake, soil blowing.	Too sandy, soil blowing.	Droughty.
GeB2: Georgeville	Moderate: seepage, slope.	Severe: hard to pack.	Deep to water	Slope, erodes easily.	Erodes easily	Erodes easily.
GoB: Goldston	Severe: depth to rock.	Severe: piping, large stones.	Deep to water	Slope, large stones, droughty.	Large stones, depth to rock.	Large stones, droughty.
GoC, GoD, GoE: Goldston	Severe: depth to rock, slope.	Severe: piping, large stones.	Deep to water	Slope, large stones, droughty.	Slope, large stones, depth to rock.	Large stones, slope, droughty.

See footnote at end of table.

Table 14.—Water Management—Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
GrB: Granville	Moderate: seepage, slope.	Slight	Deep to water	Slope, soil blowing.	Soil blowing	Rooting depth.
HeB2: Hiwassee	Moderate: seepage, slope.	Severe: hard to pack.	Deep to water	Slope	Favorable	Favorable.
HeC2, HeD2: Hiwassee	Severe: slope.	Severe: hard to pack.	Deep to water	Slope	Slope	Slope.
HoA: Hornsboro	Slight	Severe: hard to pack, wetness.	Percs slowly	Wetness, percs slowly.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
IrB: Iredell	Moderate: slope.	Severe: hard to pack.	Percs slowly, slope.	Slope, wetness, soil blowing.	Wetness, soil blowing.	Wetness, percs slowly.
JoA: Johnston	Severe: seepage.	Severe: piping, ponding.	Ponding, flooding.	Ponding, droughty, flooding.	Ponding	Wetness, droughty.
LgB: Lillington	Severe: seepage.	Severe: thin layer.	Deep to water	Slope, droughty.	Favorable	Droughty.
LgC: Lillington	Severe: seepage, slope.	Severe: thin layer.	Deep to water	Slope, droughty.	Slope	Slope, droughty.
MaB: Mayodan	Moderate: seepage, slope.	Severe: hard to pack.	Deep to water	Slope, soil blowing.	Soil blowing	Favorable.
MaC: Mayodan	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Slope.
MgB: Mayodan	Moderate: seepage, slope.	Severe: hard to pack.	Deep to water	Slope	Favorable	Favorable.
MgC, MgD: Mayodan	Severe: slope.	Severe: hard to pack.	Deep to water	Slope	Slope	Slope.
MnC*:						
Mayodan	Moderate: seepage, slope.	Severe: hard to pack.	Deep to water	Slope, soil blowing.	Soil blowing	Favorable.
Urban land	Variable	Variable	Variable	Variable	Variable	Variable.
MrB: McQueen	Moderate: slope.	Moderate: piping.	Deep to water	Percs slowly, slope, erodes easily.	Erodes easily, percs slowly.	Erodes easily, percs slowly.
MsA*:						
Misenheimer	Severe: depth to rock.	Severe: piping.	Depth to rock, too acid.	Wetness, depth to rock.	Depth to rock, wetness.	Wetness, depth to rock.

See footnote at end of table.

Table 14.—Water Management—Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
MsA*:						
Callison	Moderate: depth to rock.	Severe: piping.	Depth to rock	Wetness, depth to rock.	Depth to rock, erodes easily.	Erodes easily, depth to rock.
NaB Nanford	Moderate: seepage, depth to rock, slope.	Severe: hard to pack.	Deep to water	Slope, erodes easily.	Erodes easily	Erodes easily.
NaC Nanford	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, erodes easily.	Slope, erodes easily.	Slope, erodes easily.
NgC Nanford	Severe: slope.	Severe: thin layer.	Deep to water	Slope, soil blowing.	Slope, soil blowing.	Slope.
NsB*:						
Nanford	Moderate: seepage, depth to rock, slope.	Severe: thin layer.	Deep to water	Slope, soil blowing.	Soil blowing	Favorable.
Emporia	Moderate: seepage, slope.	Moderate: thin layer, piping.	Deep to water	Fast intake, soil blowing, slope.	Soil blowing, percs slowly.	Droughty, percs slowly.
PgB Pacolet	Moderate: seepage, slope.	Severe: piping.	Deep to water	Slope	Favorable	Favorable.
PgC, PgD, PgE Pacolet	Severe: slope.	Severe: piping.	Deep to water	Slope	Slope	Slope.
PmB2 Pacolet	Moderate: seepage, slope.	Severe: piping.	Deep to water	Slope	Favorable	Favorable.
PmC2 Pacolet	Severe: slope.	Severe: piping.	Deep to water	Slope	Slope	Slope.
PnB Pelion	Moderate: seepage.	Severe: seepage, piping.	Percs slowly	Droughty, fast intake.	Soil blowing	Droughty.
PoB*:						
Pinoka	Severe: seepage.	Severe: piping.	Deep to water	Slope, droughty.	Depth to rock	Droughty.
Carbonton	Severe: depth to rock, seepage.	Severe: thin layer, wetness, piping.	Percs slowly, depth to rock.	Slope, shallow to water, percs slowly.	Depth to rock, wetness.	Depth to rock, percs slowly.
PsC, PsD Pinoka	Severe: seepage, slope.	Severe: piping.	Deep to water	Slope, droughty.	Slope, depth to rock.	Slope, droughty.
PwB3*:						
Polkton	Moderate: depth to rock, slope.	Severe: hard to pack.	Percs slowly, depth to rock, slope.	Slope, wetness.	Depth to rock, erodes easily.	Erodes easily, depth to rock.

See footnote at end of table.

Table 14.—Water Management—Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
PwB3*:						
White Store	Moderate: depth to rock, slope.	Severe: hard to pack.	Percs slowly, slope.	Slope, wetness, percs slowly.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
PwC3*, PwD3*:						
Polkton	Severe: slope.	Severe: hard to pack.	Percs slowly, depth to rock, slope.	Slope, wetness.	Slope, depth to rock, erodes easily.	Slope, erodes easily, depth to rock.
White Store	Severe: slope.	Severe: hard to pack.	Percs slowly, slope.	Slope, wetness, percs slowly.	Slope, erodes easily, wetness.	Wetness, slope, erodes easily.
RaA Rains	Moderate: seepage.	Severe: piping, wetness.	Favorable	Wetness	Wetness, soil blowing.	Wetness.
RmA Riverview	Severe: seepage.	Severe: piping.	Deep to water	Flooding	Favorable	Favorable.
RoA Roanoke	Severe: seepage.	Severe: wetness.	Percs slowly, too acid.	Wetness, percs slowly, erodes easily.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
RwB*:						
Rock outcrop.						
Wake	Severe: depth to rock.	Severe: seepage.	Deep to water	Slope, droughty, fast intake.	Depth to rock, too sandy.	Droughty, depth to rock.
ShA Shellbluff	Moderate: seepage.	Severe: piping.	Deep to water	Flooding	Favorable	Favorable.
StA State	Severe: seepage.	Moderate: thin layer, piping.	Deep to water	Soil blowing	Soil blowing	Favorable.
TaB Tarrus	Moderate: seepage, depth to rock, slope.	Severe: piping, hard to pack.	Deep to water	Slope	Soil blowing	Favorable.
TgC*:						
Tarrus	Severe: slope.	Severe: piping, hard to pack.	Deep to water	Slope	Slope, soil blowing.	Slope.
Georgeville	Severe: slope.	Severe: hard to pack.	Deep to water	Slope	Slope	Slope.
ToA Tetotum	Severe: seepage.	Severe: wetness.	Favorable	Wetness	Erodes easily, wetness.	Erodes easily.
UdC. Udorthents						

See footnote at end of table.

Table 14.—Water Management—Continued

Soil name and map symbol	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
VaB: Vaucluse	Severe: seepage.	Severe: piping.	Deep to water	Slope, droughty, fast intake.	Soil blowing, percs slowly.	Droughty, rooting depth.
VgC, VgD: Vaucluse	Severe: seepage, slope.	Moderate: thin layer.	Deep to water	Slope, droughty, fast intake.	Slope, soil blowing, percs slowly.	Slope, droughty, rooting depth.
W*. Water						
WaB2: Wadesboro	Moderate: seepage, depth to rock, slope.	Severe: hard to pack.	Deep to water	Slope	Favorable	Favorable.
WaC2: Wadesboro	Severe: slope.	Severe: hard to pack.	Deep to water	Slope	Slope	Slope.
WcB: Wakulla	Severe: seepage.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Too sandy, soil blowing.	Droughty.
WhB2: White Store	Moderate: depth to rock, slope.	Severe: hard to pack.	Percs slowly, slope.	Slope, wetness, percs slowly.	Erodes easily, wetness, percs slowly.	Wetness, percs slowly.
WhC2: White Store	Severe: slope.	Severe: hard to pack.	Percs slowly, slope.	Slope, wetness, percs slowly.	Slope, erodes easily, wetness.	Wetness, slope, percs slowly.
WoA: Worsham	Slight	Severe: wetness.	Percs slowly	Wetness	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
WxB: Wynott	Moderate: depth to rock, slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly.	Depth to rock	Depth to rock, percs slowly.
WyC: Wynott	Severe: slope.	Severe: hard to pack.	Deep to water	Slope, percs slowly, depth to rock.	Slope, large stones, depth to rock.	Large stones, slope, depth to rock.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 15.—Engineering Index Properties

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
AeB, AeC------ Ailey	0-22	Loamy sand----	SM, SP-SM	A-2, A-3	0	0	85-100	75-100	50-80	5-20	---	NP
	22-40	Sandy loam, sandy clay loam.	SM, SC, SC-SM	A-2, A-4, A-6	0	0	90-100	75-100	60-90	30-40	20-40	3-16
	40-54	Sandy loam, sandy clay loam.	SM, SC, SC-SM	A-2, A-4, A-6	0	0	90-100	75-100	55-90	20-50	20-40	3-16
	54-62	Coarse sandy loam, sandy loam, sandy clay loam.	SM, SC, SC-SM	A-2, A-4, A-6	0	0	85-100	75-100	50-85	15-40	<40	NP-14
BaB, BaC------ Badin	0-4	Channery silt loam.	ML, SM, SC-SM, GM	A-4, A-6, A-2-4	0-1	0-10	60-100	50-85	45-85	30-80	25-50	4-20
	4-33	Silty clay, silty clay loam, channery silty clay loam.	CL, CH, ML	A-6, A-7	0	0-5	65-100	60-100	55-100	50-98	45-65	15-35
	33-38	Channery silt loam, silt loam, loam, channery silty clay loam.	SC, CL, ML, SM	A-4, A-6, A-7, A-2	0	0-15	70-85	35-80	30-80	20-75	30-50	8-18
	38-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
BdB2, BdC2---- Badin	0-6	Silty clay loam.	CL, ML	A-6, A-7	0	0-5	85-100	75-95	65-90	60-85	35-49	11-20
	6-28	Silty clay, silty clay loam, channery silty clay loam.	CL, CH	A-6, A-7	0	0-5	65-100	60-100	55-100	50-98	45-65	15-35
	28-42	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
BgB*, BgC*, BgD*:												
Badin-------	0-4	Channery silt loam.	ML, SM, SC-SM, GM	A-4, A-6, A-2-4	0-1	0-10	60-100	50-85	45-85	30-80	25-50	4-20
	4-33	Silty clay, silty clay loam, channery silty clay loam.	CL, CH, ML	A-6, A-7	0	0-5	65-100	60-100	55-100	50-98	45-65	15-35
	33-38	Channery silt loam, silt loam, loam, channery silty clay loam.	SC, CL, ML, SM	A-4, A-6, A-7, A-2	0	0-15	70-85	35-80	30-80	20-75	30-50	8-18
	38-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Goldston----	0-9	Channery silt loam.	GM, SM, ML	A-2-4, A-4	---	10-20	60-80	50-80	30-80	25-75	20-40	NP-10
	9-15	Very channery silt loam, very channery very fine sandy loam.	GM, SM, ML	A-2-4, A-4, A-1-b	---	20-50	40-80	30-80	25-80	20-60	20-40	NP-10
	15-23	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
CaB, CaC------ Candor	0-27	Sand----------	SM, SP-SM	A-2, A-3, A-2-4	0	0-2	98-100	96-100	55-90	5-15	10-14	NP
	27-39	Loamy sand----	SM, SP-SM	A-2, A-2-4	0	0-2	98-100	96-100	63-90	10-25	10-20	NP
	39-58	Sand----------	SM, SP-SM	A-2, A-3	0	0-7	90-100	90-100	55-90	5-15	10-14	NP
	58-80	Sandy loam, sandy clay loam.	SC, SC-SM, SM	A-2, A-4, A-6, A-7	0	0-7	90-100	90-100	55-90	25-49	15-45	NP-25
CeB2, CeC2---- Cecil	0-6	Sandy clay loam.	SM, SC, CL, ML	A-4, A-6	0	0-5	75-100	75-100	68-95	38-81	21-40	3-17
	6-48	Clay, clay loam.	MH, ML, CH	A-7, A-5	0	0-5	97-100	92-100	72-100	55-95	41-80	9-37
	48-62	Variable------	---	---	---	---	---	---	---	---	---	---
ChA----------- Chewacla	0-6	Loam----------	ML, CL, CL-ML	A-4, A-6, A-7	0	0	98-100	95-100	70-100	55-90	25-49	4-20
	6-14	Silt loam, silty clay loam, clay loam.	ML, CL	A-4, A-6, A-7	0	0	96-100	95-100	80-100	51-98	30-49	4-22
	14-22	Sandy clay loam, loam, sandy loam.	SM, SC-SM, ML, CL	A-4, A-7-6, A-6	0	0	96-100	95-100	60-100	36-70	20-45	2-15
	22-50	Silt loam, clay loam, silty clay loam.	ML, MH, CL, CH	A-4, A-6, A-7	0	0	85-100	75-100	60-100	51-98	22-61	4-28
	50-60	Variable------	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification Unified	Classification AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
CmA*:												
Chewacla-----	0-6	Loam----------	ML, CL, CL-ML	A-4, A-6, A-7	0	0	98-100	95-100	70-100	55-90	25-49	4-20
	6-14	Silt loam, silty clay loam, clay loam.	ML, CL	A-4, A-6, A-7	0	0	96-100	95-100	80-100	51-98	30-49	4-22
	14-22	Sandy clay loam, loam, sandy loam.	SM, SC-SM, ML, CL	A-4, A-7-6, A-6	0	0	96-100	95-100	60-100	36-70	20-45	2-15
	22-50	Silt loam, clay loam, silty clay loam.	ML, MH, CL, CH	A-4, A-6, A-7	0	0	85-100	75-100	60-100	51-98	22-61	4-28
	50-60	Variable------	---	---	---	---	---	---	---	---	---	---
Chastain-----	0-6	Loam----------	ML, CL, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	70-95	23-45	3-18
	6-60	Silty clay loam, clay loam, clay.	CL, CH, ML, MH	A-6, A-7	0	0	100	100	95-100	85-98	35-75	12-40
CnA----------- Claycreek	0-8	Fine sandy loam.	ML, CL-ML, CL	A-4, A-6	0	0-1	90-100	88-100	80-95	70-90	16-40	NP-11
	8-32	Silty clay loam, clay loam, silt loam.	CL, ML	A-4, A-6, A-5, A-7	0	0-1	95-100	90-100	90-98	80-95	20-49	7-26
	32-54	Clay loam, silty clay loam, silty clay.	ML, CL	A-4, A-6	0	0-1	95-100	90-100	90-98	80-95	16-40	7-27
	54-75	Variable------	---	---	---	---	---	---	---	---	---	---
CrB----------- Creedmoor	0-8	Fine sandy loam.	SM, SC-SM	A-4, A-2	0	0-3	98-100	95-100	70-90	30-49	15-25	NP-7
	8-18	Sandy clay loam, clay loam, silty clay loam.	CL	A-7, A-6	0	0-3	98-100	95-100	85-95	60-80	35-50	20-30
	18-42	Clay, silty clay, sandy clay.	CH	A-7	0	0-3	98-100	95-100	85-97	70-95	51-79	25-49
	42-62	Sandy loam, sandy clay loam, silty clay loam.	ML, CL-ML, SM, SC	A-7, A-6, A-4	0	0-5	98-100	95-100	85-98	45-90	25-49	4-21
	62-65	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
DAM*. Dam												

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
DoA----------- Dothan	0-12	Loamy sand----	SM	A-2	0	0	95-100	92-100	60-80	13-30	---	NP
	12-40	Sandy clay loam, sandy loam, fine sandy loam.	SC-SM, SC, SM	A-2, A-4, A-6	0	0	95-100	92-100	60-90	23-49	<40	NP-16
	40-64	Sandy clay loam, sandy clay.	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6, A-7	0	0	95-100	92-100	70-95	30-53	25-45	4-23
EmB, EmC------ Emporia	0-14	Loamy sand----	SM, SC-SM	A-2, A-1, A-4	0	0-3	90-100	80-100	40-85	15-40	<18	NP-7
	14-36	Sandy clay loam, sandy loam, clay loam.	SC, CL	A-2, A-4, A-6, A-7	0	0-2	90-100	80-100	45-95	25-70	20-50	8-30
	36-48	Sandy clay loam, clay loam, sandy clay.	SC, CL, CH	A-2, A-4, A-6, A-7	0	0-2	90-100	80-100	45-95	30-80	25-55	8-30
	48-62	Stratified sandy loam to clay.	SM, SC, ML, CL	A-1, A-2, A-4, A-6	0	0-5	70-100	55-100	30-90	20-60	<40	NP-25
FuA----------- Fuquay	0-24	Loamy sand----	SP-SM, SM	A-2, A-3	0	0	95-100	90-100	50-83	5-35	10-20	NP
	24-40	Sandy loam, fine sandy loam, sandy clay loam.	SM, SC, SC-SM	A-2, A-4, A-6	0	0	85-100	85-100	70-90	23-45	20-45	NP-13
	40-65	Sandy clay loam.	SC, SC-SM, SM	A-2, A-4, A-6, A-7-6	0	0	95-100	90-100	58-90	28-49	25-45	4-13
	65-75	Variable------	---	---	---	---	---	---	---	---	---	---
GeB2---------- Georgeville	0-4	Silty clay loam.	CL, ML	A-6, A-7, A-4	0-1	0-2	90-100	90-100	85-100	65-98	24-49	3-20
	4-42	Clay, silty clay, silty clay loam.	MH, ML	A-7	0	0-1	95-100	95-100	90-100	75-98	41-85	15-45
	42-68	Silty clay loam, loam, silt loam.	ML, CL, CL-ML	A-4, A-6	0	0-5	90-100	90-100	65-100	51-95	<30	NP-12
GoB, GoC, GoD, GoE---------- Goldston	0-9	Channery silt loam.	GM, SM, ML	A-2-4, A-4	---	10-20	60-80	50-80	30-80	25-75	20-40	NP-10
	9-15	Very channery silt loam, very channery very fine sandy loam.	GM, SM, ML	A-2-4, A-4, A-1-b	---	20-50	40-80	30-80	25-80	20-60	20-40	NP-10
	15-23	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	23	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
GrB----------- Granville	0-11	Sandy loam----	SM	A-2, A-4, A-1-b	0	0-3	96-100	89-99	40-70	22-49	20-25	NP-3
	11-53	Clay loam, sandy clay loam.	SC	A-4, A-6, A-7	0	0-3	99-100	96-100	57-69	36-49	25-48	9-25
	53-64	Variable------	---	---	---	---	---	---	---	---	---	---
HeB2, HeC2, HeD2--------- Hiwassee	0-4	Clay loam-----	CL, ML, CL-ML	A-7-6, A-6, A-4	0	0-2	95-100	95-100	88-100	50-85	25-49	3-23
	4-65	Clay, silty clay, clay loam.	ML, MH	A-7-5, A-7-6	0	0-2	95-100	95-100	80-100	51-95	40-80	12-36
HoA----------- Hornsboro	0-10	Silt loam-----	ML, CL-ML, SM	A-4	0	0	99-100	93-100	85-98	42-85	20-35	NP-10
	10-62	Clay, silty clay, silty clay loam.	CH, CL	A-7-6	0	0	99-100	93-100	87-99	60-91	45-70	25-50
	62-70	Sandy clay loam, clay loam, gravelly sandy clay loam.	CL, SC	A-7-6, A-6, A-2-6	0	0	99-100	57-100	40-96	22-80	30-50	18-30
	70-80	Variable------	---	---	---	---	---	---	---	---	---	---
IrB----------- Iredell	0-6	Fine sandy loam.	SM, SC-SM, SC	A-2-4, A-4	0-1	0-1	90-98	80-96	60-82	30-50	<35	NP-9
	6-23	Clay----------	CH	A-7	0	0	99-100	60-100	60-100	55-95	54-115	29-85
	23-54	Loam, sandy clay loam, clay loam.	CL, CH, SC	A-7	0-1	0-1	98-100	85-100	70-95	40-75	41-60	20-39
	54-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
JoA----------- Johnston	0-40	Sandy loam----	ML, SM	A-2, A-4	0	0	100	100	60-100	18-65	20-35	NP-10
	40-50	Stratified loamy sand to sand.	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-30	15-20	NP
	50-60	Stratified fine sandy loam to sandy loam.	SM	A-2, A-4	0	0	100	100	50-100	25-49	15-35	NP-10
LgB, LgC------ Lillington	0-19	Gravelly sandy loam.	SM, SP-SM	A-1, A-2	0-5	0-10	55-90	25-65	20-55	10-30	10-20	NP
	19-48	Very gravelly sandy clay loam, very gravelly clay loam.	GM, GC, SM, SC	A-2, A-4, A-6, A-7	0-5	0-10	55-90	25-65	20-55	20-49	25-40	3-15
	48-60	Stratified gravelly loamy sand to extremely gravelly sandy clay loam.	GM, SM	A-1, A-2	0	0-10	30-80	25-65	20-55	15-30	10-30	NP

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
MaB, MaC------ Mayodan	0-6	Fine sandy loam.	SM, ML	A-2, A-4	0	0-5	92-100	83-100	49-98	30-70	15-36	NP-8
	6-9	Silty clay loam, clay loam, sandy clay loam.	CL	A-4, A-6, A-7-6	0	0-2	95-100	95-100	90-100	50-98	25-50	7-26
	9-33	Clay, sandy clay, silty clay.	MH, CH, CL, ML	A-7	0	0-2	95-100	90-100	80-100	50-98	41-80	15-45
	33-40	Sandy clay loam, silty clay loam, clay loam.	CL	A-4, A-6, A-7-6	0	0-2	95-100	95-100	90-100	50-98	25-50	7-26
	40-72	Variable------	---	---	---	---	---	---	---	---	---	---
MgB, MgC, MgD- Mayodan	0-3	Gravelly sandy loam.	SM, GM, GP-GM, SP-SM	A-1, A-2-4	0	5-15	60-95	55-80	40-75	12-30	15-36	NP-4
	3-32	Clay, sandy clay, silty clay.	MH, CH, CL, ML	A-7	0	0-2	95-100	90-100	80-100	50-98	41-80	15-45
	32-60	Variable------	---	---	---	---	---	---	---	---	---	---
MnC*:												
Mayodan------	0-6	Fine sandy loam.	SM, ML	A-2, A-4	0	0-5	92-100	83-100	49-98	30-70	15-36	NP-8
	6-9	Silty clay loam, clay loam, sandy clay loam.	CL	A-4, A-6, A-7-6	0	0-2	95-100	95-100	90-100	50-98	25-50	7-26
	9-33	Clay, sandy clay, silty clay.	MH, CH, CL, ML	A-7	0	0-2	95-100	90-100	80-100	50-98	41-80	15-45
	33-40	Sandy clay loam, silty clay loam, clay loam.	CL	A-4, A-6, A-7-6	0	0-2	95-100	95-100	90-100	50-98	25-50	7-26
	40-72	Variable------	---	---	---	---	---	---	---	---	---	---
Urban land---	0-6	Variable------	---	---	---	---	---	---	---	---	---	---
MrB----------- McQueen	0-5	Loam----------	ML, CL-ML	A-4	0	0	90-100	80-100	75-100	70-95	<40	NP-10
	5-45	Silty clay, clay loam, clay.	CL	A-7, A-6	0	0	95-100	95-100	90-100	85-98	30-50	10-25
	45-55	Clay loam, silty clay loam, sandy clay loam.	CL	A-6, A-4, A-7	0	0	95-100	95-100	90-100	60-90	28-43	8-20
	55-62	Variable------	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification Unified	Classification AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
MsA*:												
Misenheimer--	0-12	Channery silt loam.	GM, SM, ML	A-4, A-2-4	0-5	0-15	65-90	55-80	30-80	25-75	20-40	NP-10
	12-18	Channery silt loam, channery loam, channery silty clay loam.	GM, SM, ML	A-4, A-2-4, A-6, A-7	0-5	0-15	65-90	55-80	30-80	25-75	20-45	NP-15
	18-32	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	32	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
Callison-----	0-7	Silt loam-----	ML, CL-ML	A-4	0	0-1	90-100	88-100	80-95	70-90	16-40	NP-10
	7-22	Silty clay loam, silt loam.	CL, ML	A-4, A-6, A-7	0	0-1	95-100	90-100	90-98	80-95	20-49	7-26
	22-28	Channery silt loam, channery silty clay loam, channery silty clay.	GM, SM, ML	A-4, A-6, A-2-4, A-7	0-5	0-15	65-100	55-100	30-98	25-95	20-40	7-27
	28-55	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	55	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
NaB, NaC------ Nanford	0-6	Silt loam-----	ML, CL-ML, CL	A-4, A-6	---	0-5	80-100	75-100	55-95	50-85	15-35	NP-15
	6-41	Silty clay loam, silty clay, clay.	CL, CH	A-7	---	0-5	80-100	75-100	70-95	65-90	40-60	15-30
	41-56	Channery silt loam, silt loam, loam.	CL-ML, SC, GM-GC, CL	A-2, A-4, A-6	---	0-5	50-80	45-75	40-75	30-70	20-35	4-12
	56-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
NgC----------- Nanford	0-7	Gravelly fine sandy loam.	SM, GM, ML	A-1, A-2, A-4	---	0-10	65-85	55-75	40-75	20-70	0-38	NP-10
	7-27	Silty clay loam, silty clay, clay.	CL, CH	A-7	---	0-5	80-100	75-100	70-95	65-90	40-60	15-30
	27-55	Channery silt loam, silt loam, silty clay loam.	CL, CL-ML, SC, GC	A-2, A-4, A-6	---	0-5	60-80	50-75	40-75	30-70	20-35	4-12
	55-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
NsB*:												
Nanford------	0-7	Gravelly fine sandy loam.	SM, GM, ML	A-1, A-2, A-4	---	0-10	65-85	55-75	40-75	20-70	0-38	NP-10
	7-27	Silty clay loam, silty clay, clay.	CL, CH	A-7	---	0-5	80-100	75-100	70-95	65-90	40-60	15-30
	27-55	Channery silt loam, silt loam, silty clay loam.	CL, CL-ML, SC, GC	A-2, A-4, A-6	---	0-5	60-80	50-75	40-75	30-70	20-35	4-12
	55-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Emporia------	0-11	Gravelly sandy loam.	SM, SC-SM	A-2, A-1, A-4	0-3	0-10	65-85	55-75	40-75	20-70	0-25	NP-15
	11-50	Sandy clay loam, sandy loam, clay loam.	SC, CL	A-2, A-4, A-6, A-7	0-2	0-5	90-100	80-100	45-95	25-70	20-50	8-30
	50-60	Stratified sandy loam to clay.	SM, SC, ML, CL	A-1, A-2, A-4, A-6	0	0-5	70-100	55-100	30-90	20-60	<40	NP-25
PgB, PgC, PgD, PgE---------- Pacolet	0-5	Gravelly sandy loam.	SM	A-2	0-2	0-3	75-90	70-85	55-75	15-30	<30	NP-3
	5-25	Gravelly sandy clay, clay loam, clay.	ML, MH	A-6, A-7	0-1	0-1	60-80	75-100	60-95	51-75	38-65	11-30
	25-60	Gravelly sandy loam, fine sandy loam, loam.	SM, SC-SM	A-4, A-2-4	0-1	0-2	60-80	50-75	40-75	30-50	<28	NP-6
PmB2, PmC2---- Pacolet	0-4	Clay loam-----	SC-SM, SC	A-4, A-6	0-1	0-1	95-100	90-100	65-87	36-50	20-40	4-17
	4-18	Sandy clay, clay loam, clay.	ML, MH, CL	A-6, A-7	0-1	0-1	80-100	80-100	60-100	51-75	38-65	11-33
	18-63	Sandy loam, fine sandy loam, loam.	SM, SC-SM	A-4, A-2-4	0-1	0-2	80-100	70-100	60-90	25-50	<28	NP-6
PnB----------- Pelion	0-10	Loamy sand----	SP, SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	10-25	NP
	10-24	Sandy clay loam, clay loam.	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	95-100	92-100	50-90	25-55	20-40	5-18
	24-40	Sandy clay loam, sandy clay, clay.	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6, A-7	0	0	98-100	92-100	50-90	25-60	20-47	5-26
	40-65	Sandy clay loam, sandy loam.	SM, SC, SC-SM	A-2, A-4, A-6	0	0	98-100	92-100	50-90	18-60	<42	NP-22

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
PoB*:												
Pinoka-------	0-10	Fine sandy loam.	ML, SM, SC	A-2, A-4	---	0-10	80-100	85-100	50-85	25-56	<30	NP-10
	10-30	Loam, sandy loam, gravelly silt loam.	SC, CL, ML, SM	A-2, A-4, A-1	---	0-10	70-100	55-100	35-95	20-75	<30	NP-10
	30-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Carbonton----	0-5	Fine sandy loam.	SM, ML	A-2, A-4	0	0-5	92-100	83-100	49-98	30-70	---	NP-8
	5-28	Clay, clay loam, silty clay loam.	MH, CH, CL, ML	A-4, A-6, A-7-6	0	0-2	95-100	90-100	80-100	50-98	41-80	15-45
	28-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
PsC, PsD------ Pinoka	0-10	Fine sandy loam.	ML, SM, SC	A-2, A-4	---	0-10	80-100	85-100	50-95	25-56	<30	NP-10
	10-30	Loam, sandy loam, gravelly silt loam.	SC, CL, ML, SM	A-2, A-4, A-1	---	0-10	70-100	55-100	35-95	20-75	<30	NP-10
	30-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
PwB3*, PwC3*, PwD3*:												
Polkton-----	0-7	Sandy clay loam.	CL, CH	A-7-6	0	0-3	95-100	95-100	80-99	70-85	45-60	25-35
	7-24	Clay, sandy clay, silty clay.	CH	A-7-6	0	0-3	95-100	90-100	80-100	70-98	70-92	45-65
	24-36	Clay loam, sandy clay loam, silty clay loam.	CL, CH	A-7-6	0	0-3	95-100	95-100	80-99	70-85	45-70	25-45
	36-52	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	52	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
White Store-	0-5	Clay loam-----	CH, CL	A-7	0	0-3	97-100	95-100	80-99	70-85	45-70	25-45
	5-48	Clay----------	CH	A-7	0	0-3	95-100	90-100	85-99	80-98	70-92	45-65
	48-52	Sandy loam, loam, clay loam.	ML, CL	A-7, A-6	0	0-3	95-100	85-100	75-95	55-85	25-50	10-30
	52-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
RaA----------- Rains	0-12	Fine sandy loam.	SM, ML	A-2, A-4	0	0	100	95-100	50-85	25-56	<35	NP-10
	12-30	Fine sandy loam, sandy clay loam, sandy loam.	SC, SC-SM, CL, CL-ML	A-2, A-4, A-6	0	0	100	95-100	55-98	30-70	18-40	4-20
	30-54	Sandy clay loam, clay loam, sandy clay.	SC, SC-SM, CL, CL-ML	A-4, A-6, A-7	0	0	100	98-100	60-98	36-72	18-45	4-28
	54-62	Sandy loam, sandy clay loam, sandy clay.	SM, SC, ML, CL	A-2, A-4, A-6	0	0	100	95-100	60-95	30-60	15-40	3-18
RmA----------- Riverview	0-10	Loam----------	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	60-80	15-30	3-14
	10-28	Sandy clay loam, silty clay loam, loam.	CL, ML, CL-ML	A-4, A-6	0	0	100	100	90-100	60-95	20-40	3-20
	28-62	Loam, fine sandy loam, loamy fine sand.	CL, CL-ML, SM, SC-SM	A-2, A-4, A-6	0	0	100	100	75-100	45-80	15-30	3-14
RoA----------- Roanoke	0-7	Loam----------	SC-SM, CL-ML, CL, SC	A-4, A-6	0	0	95-100	85-100	60-100	35-90	20-35	5-16
	7-52	Clay, silty clay, clay loam, silty clay loam.	CH, CL	A-7	0	0	90-100	85-100	85-100	65-95	45-70	22-40
	52-60	Stratified sand to clay.	CL-ML, GM-GC, CH, SM	A-1, A-2, A-4	0	0-5	40-100	35-100	25-95	15-90	10-60	NP-40
RwB*: Rock outcrop.												
Wake---------	0-18	Gravelly loamy sand.	SP-SM, SM, GM, GP-GM	A-2, A-3, A-1	0-5	0-10	45-85	40-80	30-70	5-15	10-20	NP
	18	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
ShA----------- Shellbluff	0-6	Loam----------	ML, CL-ML, CL	A-4, A-6	0	0	98-100	95-100	90-100	75-95	15-40	NP-14
	6-60	Silty clay loam, silt loam, loam.	CL, CL-ML, ML	A-4, A-6, A-7-6	0	0	98-100	95-100	70-100	70-95	20-41	4-22
StA----------- State	0-16	Fine sandy loam.	SM, SC, ML, CL	A-4, A-6	0	0	95-100	95-100	65-95	45-85	0-28	NP-15
	16-40	Loam, clay loam, sandy clay loam.	CL, SC	A-4, A-6	0	0	95-100	95-100	75-100	35-80	24-40	8-22
	40-68	Stratified sand to fine sandy loam.	SM, SC-SM, SP-SM	A-1, A-2, A-3, A-4	0	0	85-100	60-100	40-90	5-50	0-25	NP-7

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag- ments > 10 inches	Frag- ments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
TaB----------- Tarrus	0-5	Gravelly silt loam.	GM, ML, SM	A-4	---	0-10	60-80	55-75	45-75	40-70	18-32	NP-10
	5-40	Silty clay loam, silty clay, clay.	CL, CH	A-7	---	0-5	80-100	75-100	70-95	65-90	40-60	15-30
	40-54	Channery silt loam, silt loam, loam.	CL-ML, SC, GM-GC, CL	A-4, A-6, A-2	0	0-5	50-80	45-75	40-75	30-70	20-35	4-12
	54-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
TgC*:												
Tarrus-------	0-5	Gravelly silt loam.	GM, ML, SM	A-4	---	0-10	60-80	55-75	45-75	40-70	18-32	NP-10
	5-40	Silty clay loam, silty clay, clay.	CL, CH	A-7	---	0-5	10-100	75-100	70-95	65-90	40-60	15-30
	40-54	Channery silt loam, silt loam, loam.	CL-ML, SC, GM-GC, CL	A-4, A-6, A-2	0	0-5	50-80	45-75	40-75	30-70	20-35	4-12
	54-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
Georgeville--	0-12	Gravelly silt loam.	GM, ML, SM	A-4	0-5	0-10	60-80	55-75	45-75	40-70	<40	NP-10
	12-55	Clay, silty clay, silty clay loam.	MH, ML	A-7	0	0-1	95-100	95-100	90-100	75-98	41-85	15-35
	55-60	Silty clay loam, loam, silt loam.	ML, CL, CL-ML	A-4, A-6	0	0-5	90-100	90-100	65-100	51-95	<30	NP-12
ToA----------- Tetotum	0-5	Silt loam-----	SM, SC, ML, CL	A-4, A-6	0	0	85-100	80-100	65-95	45-85	0-30	NP-15
	5-48	Sandy clay loam, clay loam, silty clay loam.	SC, CL	A-6, A-7	---	0-2	85-100	80-100	60-95	35-85	30-45	10-20
	48-60	Stratified sandy clay loam to loamy fine sand.	SM, SC, ML, CL	A-2, A-4, A-6	---	0-2	80-100	75-100	50-95	15-75	0-30	NP-15
UdC----------- Udorthents	0-60	Variable------	---	---	---	---	---	---	---	---	---	---
VaB----------- Vaucluse	0-14	Loamy sand----	SM, SP-SM	A-2, A-3	0	0-5	90-100	90-100	50-75	8-30	---	NP
	14-29	Sandy clay loam, sandy loam.	SC, SC-SM	A-2, A-4, A-6	0	0-5	90-100	90-100	51-75	25-50	20-40	5-18
	29-50	Sandy clay loam, sandy loam, sandy clay.	SC, SC-SM, SM	A-2, A-4, A-6	0	0-5	95-100	92-100	51-80	20-50	<40	NP-20
	50-60	Sandy loam, sandy clay loam, loamy sand.	SM, SC, SC-SM	A-2, A-4, A-6	0	0-2	95-100	95-100	51-90	15-50	<30	NP-12

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments > 10 inches	Fragments 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
VgC, VgD------ Vaucluse	0-10	Gravelly loamy sand.	SM, SP-SM	A-1, A-2	0-1	2-5	70-90	55-80	30-50	8-30	---	NP
	10-18	Sandy clay loam, sandy loam.	SC, SC-SM	A-2, A-4, A-6	0	0-5	90-100	90-100	51-75	25-50	20-40	5-15
	18-39	Sandy clay loam, sandy loam, sandy clay.	SC, SC-SM	A-2, A-4, A-6	0	0-5	95-100	92-100	55-75	20-50	22-40	4-20
	39-60	Sandy loam, sandy clay loam, sandy clay.	SM, SC, SC-SM	A-2, A-4, A-6	0	0-5	95-100	95-100	51-90	15-50	<30	NP-12
W*. Water												
WaB2, WaC2---- Wadesboro	0-8	Clay loam-----	CL, ML, CL-ML	A-4, A-6, A-7-6	0	0-8	95-100	90-100	75-100	50-90	24-49	6-20
	8-30	Clay, clay loam, silty clay.	CL, CH	A-7	0	0-5	95-100	95-100	90-100	51-95	40-70	17-42
	30-41	Clay loam, silty clay loam, loam.	CL, ML	A-7, A-6	0	0-5	95-100	95-100	85-100	51-97	25-49	11-23
	41-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
WcB----------- Wakulla	0-24	Sand----------	SP, SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	24-38	Loamy sand, loamy fine sand, loamy coarse sand.	SM, SP-SM	A-2	0	0	100	100	55-85	10-25	15-20	NP
	38-86	Sand, fine sand, coarse sand.	SM, SP-SM, SP	A-2, A-3	0	0	100	100	50-70	4-15	10-14	NP
WhB2, WhC2---- White Store	0-6	Fine sandy loam.	ML, CL-ML	A-4	0	0-3	95-100	95-100	75-96	56-76	15-25	NP-7
	6-42	Clay----------	CH	A-7	0	0-3	95-100	90-100	85-99	80-98	70-92	45-65
	42-50	Sandy loam, loam, clay loam.	ML, CL	A-7, A-6	0	0-3	95-100	85-100	75-95	55-85	25-50	10-30
	50-60	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
WoA----------- Worsham	0-12	Loam----------	CL, CL-ML	A-4, A-6	---	0-5	90-100	85-100	70-100	50-90	20-35	4-12
	12-48	Sandy clay loam, sandy clay, clay.	SC, CH, CL	A-2, A-7	---	0-5	90-100	85-100	70-100	30-95	42-66	22-40
	48-64	Sandy loam, sandy clay loam, clay loam.	SC, CL	A-2, A-4, A-6, A-7	---	0-10	90-95	80-95	50-90	30-70	20-50	8-30

See footnote at end of table.

Table 15.—Engineering Index Properties—Continued

Soil name and map symbol	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Frag-ments > 10 inches	Frag-ments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
WxB----------- Wynott	0-5	Loam----------	ML, CL-ML, CL	A-4, A-6	0	0-5	95-100	90-100	75-95	51-80	20-40	3-20
	5-25	Clay, clay loam, silty clay.	CL, CH	A-7-6	0	0-5	85-100	85-100	80-100	65-95	40-90	25-65
	25-36	Sandy loam, fine sandy loam, loam.	SM, SC-SM	A-4, A-2-4	0-1	0-3	80-100	70-100	60-90	25-50	<28	NP-6
	36-55	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	55	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---
WyC----------- Wynott	0-10	Stony loam----	GM, GC, SM, SC	A-1, A-2-4	5-15	10-25	60-95	55-90	30-70	20-35	15-30	NP-10
	10-28	Clay, clay loam, silty clay.	CL, CH	A-7-6	0-1	0-10	85-100	85-100	80-100	65-95	40-90	25-65
	28-31	Sandy loam, fine sandy loam, loam.	SM, SC-SM	A-4, A-2-4	0-1	0-3	80-100	70-100	60-90	25-50	<28	NP-6
	31-45	Weathered bedrock.	---	---	---	---	---	---	---	---	---	---
	45	Unweathered bedrock.	---	---	---	---	---	---	---	---	---	---

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 16.--Physical and Chemical Properties of the Soils

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
AeB, AeC---------Ailey	0-22	5-10	1.35-1.45	6.0-20	0.03-0.05	4.5-6.5	Low----------	0.15	4	2	<1
	22-40	15-35	1.55-1.70	0.6-2.0	0.09-0.12	4.5-5.5	Low----------	0.24			
	40-54	18-35	1.70-1.80	0.06-0.2	0.06-0.10	4.5-5.5	Low----------	0.24			
	54-62	15-30	1.80-1.95	0.06-0.2	0.04-0.08	4.5-5.5	Low----------	0.15			
BaB, BaC---------Badin	0-4	10-27	1.40-1.60	0.6-2.0	0.14-0.20	3.5-6.5	Low----------	0.15	3	5	1-3
	4-33	35-55	1.30-1.50	0.6-2.0	0.14-0.19	3.5-5.5	Moderate-----	0.24			
	33-38	10-27	1.40-1.60	0.6-2.0	0.14-0.20	3.5-5.5	Low----------	0.15			
	38-60	---	---	---	---	---	-------------	----			
BdB2, BdC2-------Badin	0-6	27-40	1.20-1.45	0.6-2.0	0.14-0.19	3.5-6.5	Low----------	0.28	2	7	.5-2
	6-28	35-55	1.30-1.50	0.6-2.0	0.14-0.19	3.5-5.5	Moderate-----	0.24			
	28-42	---	---	---	---	---	-------------	----			
	42	---	---	---	---	---	-------------	----			
BgB*, BgC*, BgD*:											
Badin-----------	0-4	10-27	1.40-1.60	0.6-2.0	0.14-0.20	3.5-6.5	Low----------	0.15	3	5	1-3
	4-33	35-55	1.30-1.50	0.6-2.0	0.14-0.19	3.5-5.5	Moderate-----	0.24			
	33-38	10-27	1.40-1.60	0.6-2.0	0.14-0.20	3.5-5.5	Low----------	0.15			
	38-60	---	---	---	---	---	-------------	----			
Goldston--------	0-9	5-27	1.40-1.60	2.0-6.0	0.10-0.16	3.5-5.5	Low----------	0.15	2	8	.5-2
	9-15	5-27	1.40-1.60	2.0-6.0	0.06-0.12	3.5-5.5	Low----------	0.05			
	15-23	---	---	---	---	---	-------------	----			
	23	---	---	---	---	---	-------------	----			
CaB, CaC---------Candor	0-27	1-4	1.60-1.70	6.0-20	0.02-0.06	3.5-6.0	Low----------	0.10	5	1	.5-1
	27-39	6-12	1.55-1.70	6.0-20	0.06-0.10	3.5-5.5	Low----------	0.10			
	39-58	1-4	1.60-1.70	6.0-20	0.02-0.05	3.5-5.5	Low----------	0.10			
	58-80	10-35	1.35-1.60	0.6-2.0	0.12-0.16	3.5-5.5	Low----------	0.20			
CeB2, CeC2-------Cecil	0-6	20-35	1.30-1.50	0.6-2.0	0.13-0.15	4.5-6.5	Low----------	0.28	3	5	.5-1
	6-48	35-70	1.30-1.50	0.6-2.0	0.13-0.15	4.5-5.5	Low----------	0.28			
	48-62	---	---	---	---	---	-------------	----			
ChA--------------Chewacla	0-6	10-35	1.30-1.60	0.6-2.0	0.15-0.24	4.5-6.5	Low----------	0.28	5	5	1-4
	6-14	18-35	1.30-1.50	0.6-2.0	0.15-0.24	4.5-6.5	Low----------	0.32			
	14-22	18-35	1.30-1.60	0.6-2.0	0.12-0.20	4.5-6.5	Low----------	0.28			
	22-50	18-35	1.30-1.50	0.6-2.0	0.15-0.24	4.5-7.8	Low----------	0.32			
	50-60	---	---	---	---	---	-------------	----			
CmA*:											
Chewacla--------	0-6	10-35	1.30-1.60	0.6-2.0	0.15-0.24	4.5-6.5	Low----------	0.28	5	5	1-4
	6-14	18-35	1.30-1.50	0.6-2.0	0.15-0.24	4.5-6.5	Low----------	0.32			
	14-22	18-35	1.30-1.60	0.6-2.0	0.12-0.20	4.5-6.5	Low----------	0.28			
	22-50	18-35	1.30-1.50	0.6-2.0	0.15-0.24	4.5-7.8	Low----------	0.32			
	50-60	---	---	---	---	---	-------------	----			
Chastain--------	0-6	15-35	1.20-1.40	0.2-0.6	0.12-0.18	3.5-6.0	Moderate-----	0.32	4	5	1-6
	6-60	35-60	1.30-1.50	0.06-0.2	0.12-0.16	3.5-6.0	Moderate-----	0.37			

See footnote at end of table.

Table 16.—Physical and Chemical Properties of the Soils—Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
CnA-------------- Claycreek	0-8	4-20	1.20-1.40	0.6-2.0	0.15-0.22	3.5-6.5	Low----------	0.43	5	5	.5-2
	8-32	18-35	1.20-1.40	0.2-0.6	0.12-0.18	3.5-6.0	Low----------	0.43			
	32-54	27-50	1.20-1.40	0.2-0.6	0.11-0.18	3.5-6.0	Moderate-----	0.37			
	54-75	18-35	1.30-1.50	0.2-0.6	0.15-0.18	3.5-6.0	Moderate-----	0.37			
CrB-------------- Creedmoor	0-8	7-20	1.55-1.70	2.0-6.0	0.10-0.14	3.5-5.5	Low----------	0.28	3	3	.5-2
	8-18	20-35	1.45-1.65	0.2-0.6	0.13-0.15	3.5-5.5	Moderate-----	0.32			
	18-42	35-60	1.30-1.50	<0.06	0.13-0.15	3.5-5.5	High---------	0.32			
	42-62	5-35	1.60-1.95	<0.06	0.10-0.14	3.5-5.5	Low----------	0.37			
	62-65	---	---	---	---	---	-------------	----			
DAM*. Dam											
DoA-------------- Dothan	0-12	5-15	1.30-1.60	2.0-6.0	0.06-0.10	4.5-6.0	Low----------	0.15	5	2	<.5
	12-40	18-35	1.40-1.60	0.6-2.0	0.12-0.16	4.5-6.0	Low----------	0.28			
	40-64	18-40	1.45-1.70	0.2-0.6	0.08-0.12	4.5-6.0	Low----------	0.28			
EmB, EmC--------- Emporia	0-14	5-10	1.30-1.40	6.0-20	0.05-0.10	4.5-6.0	Low----------	0.15	5	2	.5-2
	14-36	18-35	1.35-1.45	0.2-2.0	0.10-0.18	4.5-6.0	Low----------	0.28			
	36-48	21-40	1.45-1.60	0.06-0.6	0.10-0.16	4.5-6.0	Moderate-----	0.20			
	48-62	5-40	1.45-1.60	0.06-2.0	0.08-0.18	4.5-6.0	Moderate-----	0.20			
FuA-------------- Fuquay	0-24	2-10	1.60-1.70	>6.0	0.04-0.09	4.5-6.0	Low----------	0.15	5	2	.5-2
	24-40	10-35	1.40-1.60	0.6-2.0	0.12-0.15	4.5-6.0	Low----------	0.20			
	40-65	20-35	1.40-1.60	0.06-0.2	0.10-0.13	4.5-6.0	Low----------	0.20			
	65-75	---	---	---	---	---	-------------	----			
GeB2------------- Georgeville	0-4	27-35	1.20-1.40	0.6-2.0	0.13-0.18	4.5-7.3	Low----------	0.49	4	6	<.5
	4-42	35-65	1.20-1.40	0.6-2.0	0.13-0.18	4.5-5.5	Low----------	0.28			
	42-68	15-40	1.20-1.40	0.6-2.0	0.05-0.10	4.5-5.5	Low----------	0.32			
GoB, GoC, GoD, GoE------------- Goldston	0-9	5-27	1.40-1.60	2.0-6.0	0.10-0.16	3.5-5.5	Low----------	0.15	2	8	.5-2
	9-15	5-27	1.40-1.60	2.0-6.0	0.06-0.12	3.5-5.5	Low----------	0.05			
	15-23	---	---	---	---	---	-------------	----			
	23	---	---	---	---	---	-------------	----			
GrB-------------- Granville	0-11	8-18	1.50-1.70	2.0-6.0	0.11-0.15	4.5-5.5	Low----------	0.24	4	3	.5-2
	11-53	18-35	1.35-1.50	0.6-2.0	0.12-0.17	4.5-5.5	Low----------	0.20			
	53-64	8-25	1.60-1.80	0.6-2.0	0.06-0.10	4.5-5.5	Low----------	0.17			
HeB2, HeC2, HeD2- Hiwassee	0-4	10-35	1.35-1.55	0.6-2.0	0.12-0.15	4.5-6.5	Low----------	0.28	5	6	.5-2
	4-65	35-60	1.30-1.45	0.6-2.0	0.12-0.15	4.5-6.5	Low----------	0.28			
HoA-------------- Hornsboro	0-10	8-20	1.40-1.60	0.6-2.0	0.17-0.25	4.5-7.8	Low----------	0.37	5	5	1-4
	10-62	35-60	1.40-1.60	0.06-0.2	0.11-0.18	4.5-8.4	High---------	0.32			
	62-70	22-40	1.40-1.75	0.2-0.6	0.10-0.17	6.1-8.4	Moderate-----	0.24			
	70-80	---	---	---	---	---	-------------	----			
IrB-------------- Iredell	0-6	10-20	1.30-1.70	2.0-6.0	0.12-0.15	5.1-7.3	Low----------	0.28	3	3	.5-2
	6-23	40-60	1.20-1.45	0.06-0.2	0.16-0.22	5.6-7.3	Very high----	0.20			
	23-54	15-35	1.30-1.60	0.06-0.2	0.14-0.18	6.1-7.8	High---------	0.28			
	54-60	---	---	---	---	---	-------------	----			
JoA-------------- Johnston	0-40	5-18	1.30-1.55	2.0-6.0	0.10-0.20	4.5-5.5	Low----------	0.20	5	5	3-8
	40-50	2-12	1.55-1.65	6.0-20	0.02-0.07	4.5-5.5	Low----------	0.17			
	50-60	5-20	1.45-1.65	6.0-20	0.06-0.12	4.5-5.5	Low----------	0.17			

See footnote at end of table.

Table 16.—Physical and Chemical Properties of the Soils—Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
LgB, LgC--------- Lillington	0-19	5-15	1.60-1.70	6.0-20	0.05-0.10	4.5-6.0	Low----------	0.10	5	8	.5-2
	19-48	20-35	1.50-1.60	2.0-6.0	0.05-0.10	4.5-5.5	Low----------	0.10			
	48-60	5-25	1.50-1.70	0.6-6.0	0.05-0.13	4.5-5.5	Low----------	0.10			
MaB, MaC--------- Mayodan	0-6	5-20	1.40-1.65	2.0-6.0	0.11-0.17	4.5-6.0	Low----------	0.24	4	3	.5-2
	6-9	20-40	1.30-1.40	0.6-2.0	0.12-0.22	4.5-6.0	Low----------	0.32			
	9-33	35-60	1.25-1.55	0.6-2.0	0.12-0.18	4.5-5.5	Moderate-----	0.28			
	33-40	18-35	1.35-1.50	0.6-2.0	0.12-0.17	4.5-5.5	Moderate-----	0.28			
	40-72	---	---	---	---	---	-------------	----			
MgB, MgC, MgD---- Mayodan	0-3	2-18	1.45-1.70	2.0-6.0	0.06-0.12	4.5-6.0	Low----------	0.15	4	8	.5-2
	3-32	35-60	1.25-1.55	0.6-2.0	0.12-0.18	4.5-5.5	Moderate-----	0.28			
	32-60	---	---	---	---	---	-------------	----			
MnC*:											
Mayodan---------	0-6	5-20	1.40-1.65	2.0-6.0	0.11-0.17	4.5-6.0	Low----------	0.24	4	3	.5-2
	6-9	20-40	1.30-1.40	0.6-2.0	0.12-0.22	4.5-6.0	Low----------	0.32			
	9-33	35-60	1.25-1.55	0.6-2.0	0.12-0.18	4.5-5.5	Moderate-----	0.28			
	33-40	20-40	1.30-1.40	0.6-2.0	0.12-0.22	4.5-5.5	Low----------	0.32			
	40-72	---	---	---	---	---	-------------	----			
Urban land------	0-6	---	---	---	---	---	-------------	----	---	---	---
MrB-------------- McQueen	0-5	12-30	1.20-1.50	0.6-2.0	0.14-0.20	3.6-6.5	Low----------	0.37	5	6	.5-2
	5-45	35-55	1.20-1.50	0.06-0.2	0.14-0.18	3.6-5.5	Moderate-----	0.37			
	45-55	27-40	1.20-1.50	0.2-0.6	0.14-0.18	3.6-5.5	Low----------	0.37			
	55-62	12-32	1.25-1.55	0.2-0.6	0.14-0.18	3.6-5.5	Low----------	0.32			
MsA*:											
Misenheimer-----	0-12	7-27	1.40-1.60	0.6-6.0	0.12-0.18	3.5-5.5	Low----------	0.15	2	5	.5-1
	12-18	7-35	1.40-1.60	0.6-6.0	0.12-0.18	3.5-5.5	Low----------	0.15			
	18-32	---	---	---	---	---	-------------	----			
	32	---	---	---	---	---	-------------	----			
Callison--------	0-7	4-20	1.20-1.40	0.6-2.0	0.15-0.22	5.1-6.0	Low----------	0.43	3	5	.5-2
	7-22	18-35	1.20-1.40	0.2-0.6	0.12-0.18	3.6-6.0	Low----------	0.43			
	22-28	18-45	1.20-1.40	0.2-0.6	0.11-0.18	3.6-6.0	Moderate-----	0.37			
	28-55	---	---	---	---	---	-------------	----			
	55	---	---	---	---	---	-------------	----			
NaB, NaC--------- Nanford	0-6	10-27	1.25-1.55	0.6-2.0	0.14-0.20	4.5-6.5	Low----------	0.43	4	5	1-3
	6-41	35-50	1.30-1.60	0.6-2.0	0.12-0.19	4.5-5.5	Low----------	0.28			
	41-56	10-25	1.25-1.55	0.6-2.0	0.15-0.20	4.5-5.5	Low----------	0.28			
	56-60	---	---	---	---	---	-------------	----			
NgC-------------- Nanford	0-7	6-12	1.35-1.45	0.6-2.0	0.14-0.20	4.5-6.5	Low----------	0.24	4	3	2-5
	7-27	28-53	1.40-1.50	0.6-2.0	0.12-0.19	4.5-5.5	Low----------	0.32			
	27-55	10-35	1.45-1.55	0.6-2.0	0.15-0.20	4.5-5.5	Low----------	0.24			
	55-60	---	---	0.00-0.06	---	---	-------------	----			
NsB*:											
Nanford---------	0-7	6-12	1.35-1.45	0.6-2.0	0.14-0.20	4.5-6.5	Low----------	0.24	4	3	2-5
	7-27	28-53	1.40-1.50	0.6-2.0	0.12-0.19	4.5-5.5	Low----------	0.32			
	27-55	10-35	1.45-1.55	0.6-2.0	0.15-0.20	4.5-5.5	Low----------	0.24			
	55-60	---	---	0.00-0.06	---	---	-------------	----			
Emporia---------	0-11	7-18	1.30-1.40	6.0-20	0.05-0.10	4.5-6.0	Low----------	0.15	5	2	.5-2
	11-50	18-35	1.35-1.45	0.2-2.0	0.10-0.18	4.5-6.0	Low----------	0.28			
	50-60	5-40	1.45-1.60	0.06-2.0	0.08-0.18	4.5-6.0	Moderate-----	0.20			

See footnote at end of table.

Table 16.—Physical and Chemical Properties of the Soils—Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
PgB, PgC, PgD,											
PgE-------------	0-5	8-20	1.00-1.50	2.0-6.0	0.06-0.10	4.5-6.5	Low----------	0.15	3	4	.5-2
Pacolet	5-25	35-65	1.30-1.50	0.6-2.0	0.12-0.15	4.5-6.0	Low----------	0.28			
	25-60	10-25	1.20-1.50	0.6-2.0	0.08-0.15	4.5-6.0	Low----------	0.28			
PmB2, PmC2-------	0-4	20-35	1.30-1.50	0.6-2.0	0.10-0.14	4.5-6.5	Low----------	0.24	2	5	.5-1
Pacolet	4-18	35-65	1.30-1.50	0.6-2.0	0.12-0.15	4.5-6.0	Low----------	0.28			
	18-63	10-25	1.20-1.50	0.6-2.0	0.08-0.15	4.5-6.0	Low----------	0.28			
PnB--------------	0-10	2-10	1.35-1.75	>6.0	0.03-0.06	3.6-6.5	Low----------	0.15	3	2	.5-2
Pelion	10-24	18-35	1.40-1.60	0.6-2.0	0.12-0.16	3.6-5.5	Low----------	0.17			
	24-40	18-50	1.40-1.75	0.06-0.6	0.06-0.10	3.6-5.5	Low----------	0.20			
	40-65	10-40	1.40-1.60	0.6-2.0	0.06-0.10	3.6-5.5	Low----------	0.15			
PoB*:											
Pinoka----------	0-10	5-18	1.20-1.40	2.0-6.0	0.10-0.15	4.5-5.5	Low----------	0.20	2-1	2	.5-2
	10-30	10-18	1.20-1.50	2.0-6.0	0.06-0.18	4.5-5.5	Low----------	0.24			
	30-60	---	---	0.2-0.6	---	---	-------------	----			
Carbonton-------	0-5	8-20	1.20-1.40	0.6-2.0	0.11-0.17	3.6-5.5	Low----------	0.24	3	2	.5-2
	5-28	35-60	1.25-1.55	0.06-0.2	0.12-0.17	3.6-5.0	Moderate-----	0.28			
	28-60	---	---	---	---	---	-------------	----			
PsC, PsD---------	0-10	5-18	1.20-1.40	2.0-6.0	0.10-0.15	4.5-5.5	Low----------	0.20	2-1	2	.5-2
Pinoka	10-30	10-18	1.20-1.50	2.0-6.0	0.06-0.18	4.5-5.5	Low----------	0.24			
	30-60	---	---	0.2-0.6	---	---	-------------	----			
PwB3*, PwC3*,											
PwD3*:											
Polkton--------	0-7	27-40	1.25-1.50	0.2-0.6	0.15-0.20	4.5-6.5	Moderate-----	0.37	3-2	5	.2-1
	7-24	35-70	1.15-1.35	<0.06	0.15-0.17	4.5-5.5	Very high----	0.37			
	24-36	20-40	1.25-1.50	0.06-0.6	0.15-0.20	4.5-5.5	High---------	0.37			
	36-52	---	---	0.00-0.06	---	---	-------------	----			
	52	---	---	0.00-0.01	---	---	-------------	----			
White Store----	0-5	27-45	1.25-1.50	0.06-0.6	0.15-0.20	4.5-5.5	High---------	0.37	3	4	<.5
	5-48	45-70	1.15-1.35	<0.06	0.15-0.17	4.5-5.5	Very high----	0.37			
	48-52	12-40	1.15-1.35	0.06-0.2	0.13-0.17	4.5-5.5	Moderate-----	0.32			
	52-60	---	---	---	---	---	-------------	----			
RaA--------------	0-12	5-20	1.30-1.60	2.0-6.0	0.10-0.14	3.6-6.5	Low----------	0.20	5	3	1-6
Rains	12-30	18-35	1.30-1.60	0.6-2.0	0.11-0.15	3.6-5.5	Low----------	0.24			
	30-54	18-40	1.30-1.50	0.6-2.0	0.10-0.15	3.6-5.5	Low----------	0.28			
	54-62	15-45	1.30-1.60	0.6-2.0	0.10-0.15	3.6-5.5	Low----------	0.28			
RmA--------------	0-10	10-27	1.30-1.60	0.6-2.0	0.16-0.24	4.5-6.5	Low----------	0.32	5	5	.5-2
Riverview	10-28	18-35	1.20-1.40	0.6-2.0	0.15-0.22	4.5-6.0	Low----------	0.24			
	28-62	10-25	1.20-1.50	0.6-2.0	0.08-0.15	4.5-6.0	Low----------	0.24			
RoA--------------	0-7	10-27	1.20-1.50	0.6-2.0	0.14-0.20	3.5-5.5	Low----------	0.37	5	5	.5-2
Roanoke	7-52	35-60	1.35-1.65	0.06-0.2	0.10-0.19	3.5-5.5	Moderate-----	0.24			
	52-60	5-50	1.20-1.50	0.06-20	0.04-0.14	3.5-5.5	Moderate-----	0.24			
RwB*:											
Rock outcrop.											
Wake------------	0-18	3-12	1.65-1.80	6.0-20	0.03-0.08	4.5-6.0	Low----------	0.15	1	2	.5-1
	18	---	---	0.00-0.01	---	---	-------------	----			

See footnote at end of table.

Table 16.—Physical and Chemical Properties of the Soils—Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
ShA-------------- Shellbluff	0-6	10-27	1.20-1.40	0.6-2.0	0.15-0.20	4.5-6.5	Low----------	0.28	5	5	.5-3
	6-60	18-35	1.20-1.50	0.6-2.0	0.12-0.22	4.5-6.5	Low----------	0.28			
StA-------------- State	0-16	10-18	1.20-1.35	0.6-2.0	0.12-0.17	3.6-5.5	Low----------	0.28	5	3	.5-2
	16-40	18-34	1.35-1.50	0.6-2.0	0.14-0.19	3.6-5.5	Low----------	0.28			
	40-68	2-15	1.35-1.50	2.0-20	0.02-0.10	3.6-6.5	Low----------	0.17			
TaB-------------- Tarrus	0-5	12-27	1.10-1.40	0.6-2.0	0.10-0.17	4.5-5.5	Low----------	0.20	4	3	.5-2
	5-40	45-60	1.40-1.45	0.6-2.0	0.08-0.12	4.5-5.5	Moderate-----	0.28			
	40-54	7-35	1.40-1.60	0.6-6.0	0.12-0.18	4.5-5.5	Low----------	0.15			
	54-60	---	---	0.00-0.06	---	---	-------------	----			
TgC*:											
Tarrus----------	0-5	12-27	1.10-1.40	0.6-2.0	0.10-0.17	4.5-5.5	Low----------	0.20	4	3	.5-2
	5-40	45-60	1.40-1.45	0.6-2.0	0.08-0.12	4.5-5.5	Moderate-----	0.28			
	40-54	7-35	1.40-1.60	0.6-6.0	0.12-0.18	4.5-5.5	Low----------	0.15			
	54-60	---	---	0.00-0.06	---	---	-------------	----			
Georgeville-----	0-12	5-27	1.20-1.40	0.6-2.0	0.15-0.20	4.5-7.3	Low----------	0.24	4	5	.5-2
	12-55	35-65	1.20-1.40	0.6-2.0	0.13-0.18	4.5-5.5	Low----------	0.28			
	55-60	15-40	1.20-1.40	0.6-2.0	0.05-0.10	4.5-5.5	Low----------	0.32			
ToA-------------- Tetotum	0-5	10-22	1.40-1.65	0.6-2.0	0.14-0.19	3.6-5.5	Low----------	0.37	4	5	.5-2
	5-48	18-35	1.40-1.65	0.6-2.0	0.14-0.19	3.6-5.5	Low----------	0.32			
	48-60	5-30	1.50-1.80	0.6-20	0.08-0.12	3.6-5.5	Low----------	0.32			
UdC-------------- Udorthents	0-6	---	---	---	---	---	-------------	----	---	---	---
VaB-------------- Vaucluse	0-14	2-10	1.30-1.60	6.0-20	0.04-0.08	4.5-6.0	Low----------	0.15	3	2	<1
	14-18	18-35	1.35-1.75	0.6-2.0	0.10-0.15	3.6-5.5	Low----------	0.24			
	18-50	18-45	1.75-1.95	0.06-0.6	0.04-0.08	3.6-5.5	Low----------	0.24			
	50-60	5-30	1.55-1.90	2.0-6.0	0.04-0.08	3.6-5.5	Low----------	0.17			
VgC, VgD--------- Vaucluse	0-10	0-10	1.30-1.60	6.0-20	0.04-0.07	4.5-6.0	Low----------	0.10	3	2	<2
	10-18	18-35	1.35-1.75	0.6-6.0	0.10-0.15	4.5-5.5	Low----------	0.24			
	18-39	18-45	1.75-1.95	0.06-0.6	0.04-0.08	3.6-5.5	Low----------	0.24			
	39-60	5-30	1.55-1.90	2.0-6.0	0.04-0.08	3.6-5.5	Low----------	0.17			
W*. Water											
WaB2, WaC2------- Wadesboro	0-8	7-30	1.35-1.55	0.6-2.0	0.14-0.20	4.5-6.0	Low----------	0.32	4	5	.5-2
	8-30	35-60	1.25-1.40	0.6-2.0	0.14-0.20	4.5-6.0	Moderate-----	0.28			
	30-41	10-35	1.30-1.45	0.6-2.0	0.14-0.20	4.5-6.0	Low----------	0.24			
	41-60	---	---	---	---	---	-------------	----			
WcB-------------- Wakulla	0-24	2-8	1.45-1.60	6.0-20	<0.05	4.5-6.0	Low----------	0.10	5	1	.5-1
	24-38	5-12	1.45-1.60	6.0-20	0.05-0.10	4.5-6.0	Low----------	0.10			
	38-86	2-8	1.45-1.60	6.0-20	<0.05	4.5-6.0	Low----------	0.10			
WhB2, WhC2------- White Store	0-6	5-20	1.30-1.65	0.6-2.0	0.14-0.16	5.6-6.0	Low----------	0.28	3	5	.5-2
	6-42	45-70	1.15-1.35	<0.06	0.15-0.17	4.5-5.5	Very high----	0.37			
	42-50	12-40	1.15-1.35	0.06-0.2	0.13-0.17	4.5-5.5	Moderate-----	0.32			
	50-60	---	---	---	---	---	-------------	----			
WoA-------------- Worsham	0-12	10-25	1.25-1.55	0.6-2.0	0.14-0.20	4.5-5.5	Low----------	0.37	4	5	1-3
	12-48	30-55	1.35-1.65	0.00-0.06	0.10-0.16	4.5-5.5	Moderate-----	0.28			
	48-64	10-40	1.20-1.50	0.2-0.6	0.08-0.19	4.5-5.5	Moderate-----	0.28			

See footnote at end of table.

Table 16.—Physical and Chemical Properties of the Soils—Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodi-bility group	Organic matter
	In	Pct	g/cc	In/hr	In/in	pH					Pct
WxB: Wynott	0-5	10-27	1.20-1.50	0.6-2.0	0.14-0.20	4.5-6.5	Low	0.32	3	5	.5-2
	5-25	35-65	1.20-1.50	0.06-0.2	0.15-0.17	4.5-6.5	High	0.28			
	25-36	10-25	1.20-1.50	0.6-2.0	0.08-0.15	4.5-6.5	Low	0.28			
	36-55	---	---	0.00-0.06	---	---	---	----			
	55	---	---	---	---	---	---	----			
WyC: Wynott	0-10	5-20	1.45-1.65	2.0-6.0	0.08-0.15	4.5-6.5	Low	0.10	2	8	.5-2
	10-28	35-65	1.20-1.50	0.06-0.2	0.15-0.17	4.5-6.5	High	0.28			
	28-31	10-25	1.20-1.50	0.6-2.0	0.08-0.15	4.5-6.5	Low	0.28			
	31-45	---	---	0.00-0.06	---	---	---	----			
	45	---	---	---	---	---	---	----			

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 17.—Soil and Water Features

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydro-logic group	Flooding: Frequency	Flooding: Duration	Flooding: Months	High water table: Depth	High water table: Kind	High water table: Months	Bedrock: Depth	Bedrock: Hard-ness	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
					Ft			In			
AeB, AeC---------- Ailey	B	None--------	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
BaB, BaC, BdB2, BdC2------------- Badin	B	None--------	---	---	>6.0	---	---	20-40	Soft	High-----	High.
BgB*, BgC*, BgD*:											
Badin------------	B	None--------	---	---	>6.0	---	---	20-40	Soft	High-----	High.
Goldston---------	C	None--------	---	---	>6.0	---	---	10-20	Soft	Moderate	High.
CaB, CaC---------- Candor	A	None--------	---	---	4.0-6.0	Apparent	Dec-Mar	>60	---	Low------	High.
CeB2, CeC2-------- Cecil	B	None--------	---	---	>6.0	---	---	>60	---	High-----	High.
ChA--------------- Chewacla	C	Frequent----	Brief to long.	Nov-Apr	0.5-2.0	Apparent	Nov-Apr	>60	---	High-----	Moderate.
CmA*:											
Chewacla---------	C	Frequent----	Brief to long.	Nov-Apr	0.5-2.0	Apparent	Nov-Apr	>60	---	High-----	Moderate.
Chastain---------	D	Frequent----	Very long	Nov-Jun	0-1.0	Apparent	Nov-May	>60	---	High-----	High.
CnA--------------- Claycreek	C	None--------	---	---	1.5-3.0	Perched	Dec-Mar	>60	---	Moderate	Moderate.
CrB--------------- Creedmoor	C	None--------	---	---	1.5-2.0	Perched	Jan-Mar	>60	---	High-----	High.
DAM*. Dam											
DoA--------------- Dothan	B	None--------	---	---	3.0-5.0	Perched	Jan-Apr	>60	---	Moderate	Moderate.
EmB, EmC---------- Emporia	C	None--------	---	---	3.0-4.5	Perched	Nov-Apr	>60	---	Moderate	High.
FuA--------------- Fuquay	B	None--------	---	---	4.0-6.0	Perched	Jan-Mar	>60	---	Low------	High.
GeB2-------------- Georgeville	B	None--------	---	---	>6.0	---	---	>60	---	High-----	High.
GoB, GoC, GoD, GoE-------------- Goldston	C	None--------	---	---	>6.0	---	---	10-20	Soft	Moderate	High.
GrB--------------- Granville	B	None--------	---	---	>6.0	---	---	>60	---	Moderate	Moderate.

See footnote at end of table.

Table 17.—Soil and Water Features—Continued

Soil name and map symbol	Hydro-logic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hard-ness	Uncoated steel	Concrete
					Ft			In			
HeB2, HeC2, HeD2-- Hiwassee	B	None--------	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
HoA--------------- Hornsboro	D	Rare--------	---	---	1.0-1.5	Apparent	Nov-May	>60	---	Low------	Low.
IrB--------------- Iredell	C/D	None--------	---	---	1.0-2.0	Perched	Dec-Apr	>60	---	High-----	Low.
JoA--------------- Johnston	D	Frequent----	Brief to long.	Nov-Jul	+1-1.5	Apparent	Nov-Jun	>60	---	High-----	High.
LgB, LgC---------- Lillington	B	None--------	---	---	>6.0	---	---	>60	---	Low------	Moderate.
MaB, MaC, MgB, MgC, MgD--------- Mayodan	B	None--------	---	---	>6.0	---	---	>60	---	High-----	Moderate.
MnC*:											
Mayodan----------	B	None--------	---	---	>6.0	---	---	>60	---	High-----	Moderate.
Urban land-------	-	None--------	---	---	>2.0	---	---	>10	---	---	---
MrB--------------- McQueen	C	None--------	---	---	4.0-6.0	Apparent	Jan-Mar	>60	---	Moderate	Moderate.
MsA*:											
Misenheimer------	C	None--------	---	---	1.0-1.5	Perched	Dec-Apr	10-20	Soft	High-----	High.
Callison---------	C	None--------	---	---	1.5-3.0	Perched	Dec-Mar	20-40	Soft	Moderate	High.
NaB, NaC---------- Nanford	C	None--------	---	---	>6.0	---	---	40-60	Soft	Moderate	High.
NgC--------------- Nanford	B	None--------	---	---	>6.0	---	---	40-60	Soft	Moderate	High.
NsB*:											
Nanford----------	B	None--------	---	---	>6.0	---	---	40-60	Soft	Moderate	High.
Emporia----------	C	None--------	---	---	3.0-4.5	Perched	Nov-Apr	>60	---	Moderate	High.
PgB, PgC, PgD, PgE, PmB2, PmC2-- Pacolet	B	None--------	---	---	>6.0	---	---	>60	---	High-----	High.
PnB--------------- Pelion	B/D	None--------	---	---	1.0-2.5	Perched	Nov-Apr	>60	---	High-----	High.
PoB*:											
Pinoka-----------	B	None--------	---	---	>6.0	---	---	20-40	Hard	Low------	High.
Carbonton--------	C	None--------	---	---	1.0-2.0	Perched	Nov-May	20-40	Soft	Low------	High.
PsC, PsD---------- Pinoka	B	None--------	---	---	>6.0	---	---	20-40	Hard	Low------	High.

See footnote at end of table.

Table 17.—Soil and Water Features—Continued

Soil name and map symbol	Hydro-logic group	Flooding: Frequency	Flooding: Duration	Flooding: Months	High water table: Depth	High water table: Kind	High water table: Months	Bedrock: Depth	Bedrock: Hard-ness	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
					Ft			In			
PwB3*, PwC3*, PwD3*:											
Polkton	D	None	---	---	1.5-2.5	Perched	Dec-Mar	20-40	Soft	High	High.
White Store	D	None	---	---	1.0-1.5	Perched	Dec-Mar	40-72	Soft	High	High.
RaA Rains	B/D	None	---	---	0-1.0	Apparent	Nov-Apr	>60	---	High	High.
RmA Riverview	B	Occasional	Brief to long.	Dec-Mar	3.0-5.0	Apparent	Dec-Mar	>60	---	Low	Moderate.
RoA Roanoke	D	Rare	---	---	0-1.0	Apparent	Nov-May	>60	---	High	High.
RwB*: Rock outcrop.											
Wake	D	None	---	---	>6.0	---	---	8-20	Hard	Moderate	Moderate.
ShA Shellbluff	B	Occasional	Brief	Dec-Apr	3.0-5.0	Apparent	Dec-Apr	>60	---	Moderate	Moderate.
StA State	B	Rare	Brief	Dec-Jun	4.0-6.0	Apparent	Dec-Jun	>60	---	Moderate	High.
TaB Tarrus	B	None	---	---	>6.0	---	---	40-60	Soft	High	High.
TgC*:											
Tarrus	B	None	---	---	>6.0	---	---	40-60	Soft	High	High.
Georgeville	B	None	---	---	>6.0	---	---	>60	---	High	High.
ToA Tetotum	C	Rare	---	---	1.5-2.5	Apparent	Dec-Apr	>60	---	High	High.
UdC. Udorthents											
VaB, VgC, VgD Vaucluse	C	None	---	---	>6.0	---	---	>60	---	Low	High.
W*. Water											
WaB2, WaC2 Wadesboro	B	None	---	---	>6.0	---	---	40-60	Soft	High	High.
WcB Wakulla	A	None	---	---	>6.0	---	---	>60	---	Low	High.
WhB2, WhC2 White Store	D	None	---	---	1.0-1.5	Perched	Dec-Mar	40-72	Soft	High	High.
WoA Worsham	D	None	---	---	0-1.0	Apparent	Nov-Apr	>60	---	High	Moderate.

See footnote at end of table.

Table 17.—Soil and Water Features—Continued

Soil name and map symbol	Hydro- logic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hard- ness	Uncoated steel	Concrete
					Ft			In			
WxB, WyC---------- Wynott	C	None--------	---	---	>6.0	---	---	20-40	Soft	High-----	Moderate.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 18.—Classification of the Soils

(An asterisk in the first column indicates that the soil is a taxadjunct to the series. See text for a description of those characteristics of the soil that are outside the range of the series)

Soil name	Family or higher taxonomic class
Ailey	Loamy, kaolinitic, thermic Arenic Kanhapludults
Badin	Fine, mixed, semiactive, thermic Typic Hapludults
Callison	Fine-silty, siliceous, semiactive, thermic Aquic Hapludults
Candor	Sandy, siliceous, thermic Arenic Paleudults
Carbonton	Fine, mixed, semiactive, thermic Oxyaquic Hapludalfs
Cecil	Fine, kaolinitic, thermic Typic Kanhapludults
*Chastain	Fine, mixed, semiactive, acid, thermic Fluvaquentic Endoaquepts
Chewacla	Fine-loamy, mixed, active, thermic Fluvaquentic Dystrudepts
Claycreek	Fine-silty, siliceous, semiactive, thermic Oxyaquic Hapludalfs
Creedmoor	Fine, mixed, semiactive, thermic Aquic Hapludults
Dothan	Fine-loamy, kaolinitic, thermic Plinthic Kandiudults
Emporia	Fine-loamy, siliceous, subactive, thermic Typic Hapludults
Fuquay	Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults
Georgeville	Fine, kaolinitic, thermic Typic Kanhapludults
Goldston	Loamy-skeletal, siliceous, semiactive, thermic, shallow Typic Dystrudepts
Granville	Fine-loamy, siliceous, semiactive, thermic Typic Hapludults
Hiwassee	Fine, kaolinitic, thermic Typic Rhodudults
Hornsboro	Fine, mixed, active, thermic Typic Natraqualfs
Iredell	Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs
Johnston	Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts
Lillington	Loamy-skeletal, siliceous, semiactive, thermic Typic Hapludults
Mayodan	Fine, mixed, semiactive, thermic Typic Hapludults
McQueen	Fine, mixed, semiactive, thermic Typic Hapludults
Misenheimer	Loamy, siliceous, semiactive, thermic, shallow Aquic Dystrudepts
Nanford	Fine, kaolinitic, thermic Typic Kanhapludults
Pacolet	Fine, kaolinitic, thermic Typic Kanhapludults
Pelion	Fine-loamy, kaolinitic, thermic Aquic Kanhapludults
Pinoka	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Polkton	Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs
Rains	Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults
Riverview	Fine-loamy, mixed, active, thermic Fluventic Dystrudepts
Roanoke	Fine, mixed, semiactive, thermic Typic Endoaquults
Shellbluff	Fine-silty, mixed, active, thermic Fluventic Dystrudepts
State	Fine-loamy, mixed, semiactive, thermic Typic Hapludults
Tarrus	Fine, kaolinitic, thermic Typic Kanhapludults
Tetotum	Fine-loamy, mixed, semiactive, thermic Aquic Hapludults
Udorthents	Udorthents
Vaucluse	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Wadesboro	Fine, mixed, semiactive, thermic Typic Rhodudults
Wake	Mixed, thermic Lithic Udipsamments
Wakulla	Sandy, siliceous, thermic Psammentic Hapludults
White Store	Fine, mixed, active, thermic Oxyaquic Vertic Hapludalfs
Worsham	Fine, mixed, active, thermic Typic Endoaquults
Wynott	Fine, mixed, active, thermic Typic Hapludalfs